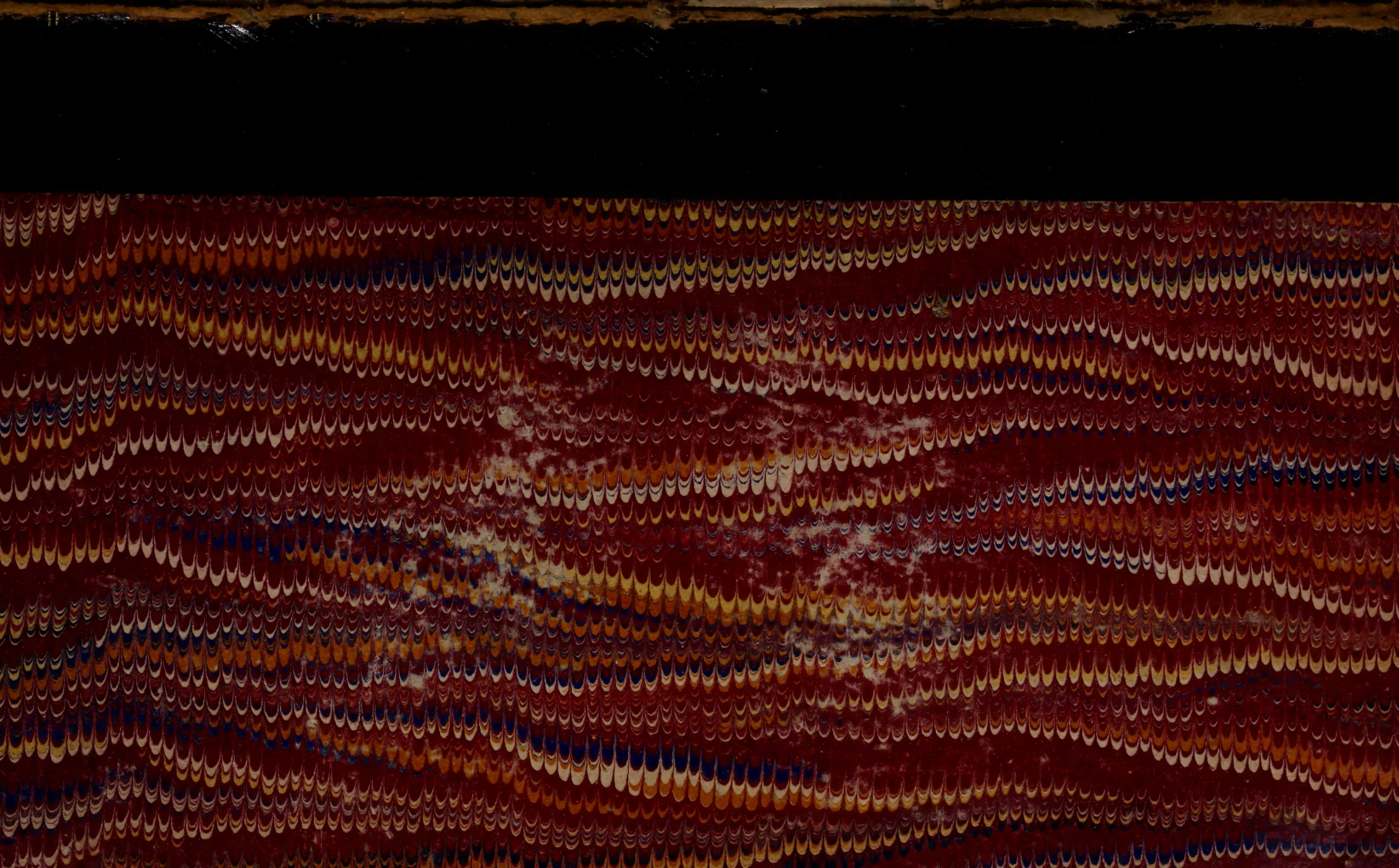


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VIRGINIA

MEDICAL MONTHLY,

(RICHMOND.)

VOLUME II,

From APRIL, 1875, to MARCH, 1876 (inclusive),

Containing the Transactions of the Sixth Annual Session of the Medical Society of Virginia, and the Proceedings of the Second Annual Meeting of the Association of Medical Officers of the Confederate States Army and Navy.

Landon B. Edwards, M. D.,
EDITOR AND PROPRIETOR.

RICHMOND:
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1876.

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In presenting the second annual volume of the *Monthly*, the Editor wishes to acknowledge the kindness of friends all over the country who, by their contributions of pen, have materially aided in elevating and sustaining the character of the journal, and by their generous influence have extended its circulation into every State of the Union. The Editor hopes that, profiting by the experience already had, and by devoting himself to his duty in the future as entirely as in the past, his labors will merit a continued increase of professional patronage.

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VIRGINIA
MEDICAL MONTHLY.

VOL II. RICHMOND, APRIL, 1875. No. 1.

Original Communications.

ART. I.—*Prophylaxis of Child-bed Fever, with Some Remarks on Pathologico-Practical Medicine.* By JOHN P. METTAUER, M. D., LL. D., Worsham, Prince Edward Co., Va.

The writer trusts that the great importance of child-bed fever, in its relations with domestic happiness, will excuse his seeming obtrusiveness, in again placing it before the profession through the pages of a medical journal. Some years since he contributed a paper on the prophylactic treatment of this disease through the *Charleston Journal*, which, by his request, was copied into the *Stethoscope* and *Virginia Medical Gazette*, No. 4, Vol. I., April, 1851, and the republication of the paper, after comparatively short intervals, indicates the interest he felt in regard to this cruel disease. He does, indeed, feel an abiding and profound interest in it now, after the lapse of years of experience with, and reflections upon it; and it is that interest which induces him at this time to call the attention of his brethren again to the subject.

The great fatality of child-bed fever appeals equally to the science and sympathy of the entire medical profession, and with such powerful influences, even in this age of progress and enlightenment, it continues, in a degree, to be an opprobrium of the healing art. Out of the vast number of cases of the disease which have occurred throughout the world, comparatively few recoveries have followed; and even now, in this enlightened age, it defies treatment too often, or when treated, the methods pursued partake more of charlatanry than sound and rational therapeutics.

19473

The writer, as the caption indicates, proposes chiefly, in this paper, to consider the preventive or prophylactic treatment of child-bed fever, with such pathological reflections as may be necessary to illustrate and support his therapeutical views; and, as preliminary to the examination of these subjects, he will state that the evidence, in the present state of our knowledge and of the science of medicine, fully sustains the opinion that puerperal fever is an inflammatory affection, and that the organs concerned in gestation and delivery, or many of them, are the seats of the inflammation. The condition of the female organs concerned in gestation, however, demanding the treatment about to be considered, is not one of inflammation, but a state strongly predisposing to it, which will now be examined.

Pregnancy has been variously regarded as a physiological and pathological state, and, as yet, the question is a mooted one; but it matters not, as regards our present purpose, how the question is decided, as, in the opinion of the writer, either condition would predispose to puerperal fever. The histogeny of the uterus and its appendages, and, indeed, of all or nearly all of the contiguous and some remote organs, is certainly changed; and these changes doubtless indicate altered nutrition. The enlargement of the uterus, the thickening of its walls, the wounding by the separation of the secundines of its cavity, the expansion and thickening of the peritoneal lining of the abdomino-pelvic cavity, of the vulva, perineum, and the hydropic disposition—to say nothing of the nausea, vomiting, depraved appetite, thirst, constipation and some others—seem to indicate any other condition of a pregnant woman than a physiological one. These changes are necessary, it must be conceded, as elements of the important processes of gestation and parturition, but they certainly are characterized by many of the phenomena of diseased states, and, doubtless, predisposed to decided morbid results, such as the diversified diseases liable to follow pregnancy and parturition, but most frequently puerperal fever.

The histogenetic condition of the organs concerned in pregnancy and parturition, seems to be a peculiar form, a *sui generis* description of hypertrophy, an abnormity of organization of certain structures, in which pathologico-physiological nutrition exists, designed exclusively for certain physiologico-pathological

purposes in the female economy; and after subserving the purposes of gestation and parturition, more or less gradually subsides, but predisposes to puerperal fever, as already intimated, as long as it continues, and probably for some time after the original normal organization is re-established. This state of the changed organs, which might be termed, not inappropriately, perhaps, incidental or superadvenient, after delivery gradually retrogrades, and finally is lost or merges in the normal action. When undisturbed by incidental causes, the reparative powers of the economy generally conduct this changed condition to a favorable termination, and the organs resume their original normal exercises and status. In some instances, however, the conservative vitalities are unable to effectuate such reparation, and the abnormal condition assumes a decided morbid state, constituting puerperal fever, by the superaddition of phlogosis; and such are the examples, very probably, generally ascribed to the contagion.

The uterus and its appendages, as well as its contiguous organs, which have been referred to as the seats of puerperal peritonitis, being left after parturition in the abnormal condition the writer has briefly described; and that state, in his opinion, constituting the true and most important element in the causation of the disease, it follows, as a necessary conclusion, if his view is correct, that the restoration of the organs to their normal condition is, or ought to be, the first therapeutical indication to be met in medicating for the prevention of child-bed fever, and his proceeding in that view will next be described.

The prophylaxis of puerperal fever will be considered under the heads of *early* and *later purging;* and first, of early purging:

Early purging after delivery may be resorted to in a few hours if there should be threatening symptoms, especially if the labor was preceded by or attended with unusual suffering. If the latter period of gestation has been characterized by a feverish, restless state, often accompanied with undue pain, and sensitiveness or tenderness of the abdomen, sick stomach, loss of appetite, and thirst, restless nights; and if the labor has been protracted, laborious, and the liquor amnii unduly warm or cool, as well as the uterus and vagina, there would be strong grounds for apprehending an attack of puerperal fever, and early purging should

be promptly resorted to. In such cases, the writer has often purged in 3, 4 and 5 hours after delivery; and in several very threatening cases, to save time, the cathartic was administered before removing the placenta, and without causing disquiet, or in any way adding to the suffering of the patient; on the contrary, they were followed by immediate relief, the catharsis seeming to have removed almost magically every unpleasant symptom. Some of these examples, besides the symptoms which have been named, are attended with distressing thirst, sensations of internal heat, nausea and often vomiting, for the relief of which the writer found pounded ice, freely used, a perfect remedy.

The first case in which the ice was employed occurred many years since, and near about the period when this valuable remedy first came into use, and when, too, it was regarded as a dangerous, untried remedy. The writer, however, presumed to make use of it in a tentative manner, but, he owns, with many misgivings. The first teaspoonful he gave acted like magic in calming the suffering lady, who could not avoid exclaiming, "Oh! what relief." After a few more spoonfuls were taken, allowing intervals of ten or fifteen minutes between the potions, the lady greatly relieved without the slightest apparent disagreement of the ice, the remedy was permitted to be used pretty much *ad libium*. In this case, as the symptoms were of the most threatening character, as soon as the stomach was composed, a cathartic was given—

℞. Aloes..... ....grs. ij
Calomel..... .....grs. x
Scammony..... ..... grs. iij

M. Make into three pills.

In addition, the abdomen, which was somewhat tender and puffy, was freely embrocated with spirits of turpentine, tincture of gum camphor, and water of ammonia, mixed together in nearly equal quantities. Also a tea of fresh pine leaves, cooled with ice, was directed to be used as a diuretic and emmenagogue, to restore the lochial flow and urinary secretion, both of which were deficient. In this case, the liquor amnii, when the membranes bursted, was almost of scalding temperature, and the vagino-uterine walls also were unduly warm. In four hours after the administration of the cathartic pills, an enema of strong salt water was administered, which was speedily followed by a

copious evacuation, and in rapid succession two others occurred, the two last being also quite copious, consistent, and satisfactorily feculent. After the purging storm subsided, and some light nourishment had been taken, the lady slept several hours, and upon awaking, expressed herself as greatly relieved. The sequel of this case was most favorable, and the recovery, by no means slow, differed very slightly from that following an ordinary labor. It was only necessary during the sequel to maintain the bowels in a soluble state. The pine leaf tea and embrocations were only kept up three days. The treatment seemed to restore healthy action to the organs involved in pregnancy and parturition almost instantly. The lady bore several children after this attack without the least threatening of a like one. In all respects, this was truly one of the most threatening cases the writer ever witnessed; and puerperal fever of violent character, in all probability, would have followed, had preventive treatment been delayed ten hours after parturition, as the symptoms before and after delivery clearly indicated, to the mind of the writer, at least, that the uterus and contiguous organs were on the verge of inflammation.

Some short time after the case just referred to occurred, one of very similar character appeared in the wife of an intelligent physician, to whom a medical friend of the writer was called in great haste, and who reported the case to the writer immediately on his return home, where the writer was making a friendly visit at the time. The symptoms of this case seemed so similar to those of the writer's patient, and feeling the deepest interest in it, he urged his friend to hasten back to the lady, and advised him to give her, without a moment's delay, such a cathartic as the writer gave his patient. The advice of the writer was taken, and the cathartic, in all respects, was followed by the most satisfactory results. The lady expressed great surprise at the mild and pleasant action of the cathartic, as well as for the great relief it afforded her; and the husband of the lady, as well as the physician who administered the cathartic, ever afterwards held the remedy in the highest estimation. The cathartic in this case was administered about twelve hours after delivery, and very little treatment was required after its operation, and what was done consisted in guarding against constipation chiefly.

These cases, though briefly referred to, are good and forcible examples of the cases demanding early purging, as well as in furnishing excellent illustrations of the efficacy of such treatment. They do not often occur, especially of such grave intensity, and it is fortunate for females that such is the case, as, otherwise, more of them would be lost, by reason of delayed treatment, under the erroneous belief that the symptoms only indicated a slight variation of the delivery from natural examples of it. The writer could refer to many other cases under this head, but not of as threatening characters, in which early purging was employed with the best results; and he generally used for the purpose the combination indicated in the early part of this paper; yet, he believes any impressive cathartic would meet the indications fully as well. He was induced to combine the scammony with the other ingredients because it had seemed, from his trials of it, to be specially adapted to serous inflammations, in which purging was required. And early purging as a preventive of puerperal fever was suggested to him by the great benefit he had often derived from that remedy after surgical operations involving the abdomen, as well as its contained organs.

Purging *later* after delivery is applicable to all cases, and should not be omitted in any, even the most natural and easy. The organs concerned in pregnancy and parturition are unquestionably left in a state of hypertrophy of some kind, and, consequently are predisposed to inflammation, if that state is not a form of the process, in every case of pregnancy; and, as in the admitted forms of hypertrophy, our most reliable and valuable therapeutical agent is purgation, it should be resorted to in the puerperal form. The writer, in the cases embraced under this head, has adopted the rule to purge in every case of delivery in eight or ten hours after the completion of the process; and for the purpose he, in many instances, permits patients to select the cathartic, as it is common for females, in such cases, to have their preferences. In a majority of instances, oil should be preferred, because it impresses the mucous membrane of the enteritic cavity decidedly, as well as emulges the muciparous crypts and the tributary organs more or less freely; also, it procures copious as well as feculent evacuations. Any of the mild cathartic pills may be employed. Generally, saline cathartics are

objectionable; but now and then a compound magnesio-saline or a Seidlitz powder will answer very well. In all cases the bowels should be carefully attended to until healthy action is restored to the uterus, its appendages, and the contiguous organs; and females are to be regarded as predisposed to child-bed fever until that is effected.

The action of purgatives in correcting the condition of the uterus and the other organs which predisposes to child-bed fever, seems easy of explanation. They are universally conceded to enfeeble the vital powers; but other influences are exerted by them also, not less important as remedies. While they enfeeble by withholding food, disturbing digestion and nutrition, and by rapidly drawing from the system large quantities of its sero-mucus, they also set up points of revulsion in the intestines—a most valuable agency in cerebral and some other affections—and temporarily render the secerno-nutritive functions subservient to the absorbent, thereby favoring absorption.

In predisposed states of the utero-associate organs to puerperal fever, the therapeutic action of cathartics appears to be absorbo-secernent. They seem to disgorge at once the hypertrophied organs, and restore their secretory exercises; yet, they likewise exert valuable reparative influences into the economy at large, by re-establishing general secretion. And they rarely ever prostrate the vital energies, when feculent evacuations of proper consistence and odor are procured by them.

Along with early as well as late purging, especially the former, it will sometimes be necessary to employ diaphoretics, narcotics, stimulants and tonics; and the good judgment of the obstetrical attendant will readily inform him when they are to be resorted to, and what agents are most proper.

The stage of convalescence must be carefully watched, and if demanding treatment, it must be promptly resorted to, or a patient and brilliant prophylaxis may be lost when least expected. Soluble bowels greatly favors convalescence, and should not be lost sight of by medical attendants or patients. And officious visiting, as well as conversation, must never be allowed.

If the preventive treatment fails, and puerperal fever supervenes, it will be announced by symptoms which need only to be witnessed once to be remembered ever afterwards. It was not

the writer's intention, when he commenced this paper, to touch upon puerperal fever only nominally; but after having concluded his examination of the preventive or prophylactic treatment, it occurred to him that it might not be unacceptable to readers to know something of the writer's method of treating the disease itself, and such information it is now proposed to supply by the report of a case once treated by him, which ended in recovery, but never was exceeded in severity by any example of the disease as far as the writer's experience enables him to judge.

The subject of this case was a primipara in her 18th year, of small, delicate person, but healthy, and performed her duties well as a servant and waiter in quite a large family. Of the pregnancy, the writer learnt that nothing distinguished it from natural pregnancies. Of the labor, there was no satisfactory account given, as it was managed by an ignorant colored woman. All that the writer could ascertain clearly was that there had been great suffering, and that it continued over two days before the delivery took place. The third day after delivery the writer saw the woman for the first time, and was informed by the attendants that her attack commenced early the day after delivery, and was ushered in by a chill, succeeded by a high fever, which had never abated in the slightest degree; and that violent pain throughout the abdomen and swelling followed the chill, or seemed to set in with it. The writer found the woman with very high fever, the pulse exceeding 140, tense and concentrated; the abdomen enormously tumefied and exceedingly sensitive, hot and tense; great thirst; sick stomach; delirium; incessant moaning; decubitus constantly dorsal; respiration accelerated and laborious, with frequent sighing; the lochia dried up; the urinary secretion defective, or urination impracticable from the tumid condition of the walls of the abdomen; the utero-vaginal walls dry and hot, with a slight fetid discharge from them; and the bowels completely locked up, altogether presenting a case "fearful to behold." After a very hurried examination of this appalling case, the writer determined to bleed the patient, and informed the friends that as it was a desperate, nay, almost hopeless case, he intended to bleed the woman to death, in hopes thereby to save her life. Accordingly, a large orifice was formed, and blood rapidly detracted in considerable quantity, perhaps 40 ounces,

causing complete syncope, accompanied by a deluging perspiration. Applying the finger upon the orifice until and for some minutes after resuscitation, and finding reaction vigorous, and threatening decidedly, it was removed from the orifice and a second detraction of blood made, to the extent of inducing the profoundest swoon the writer ever witnessed, which, however, after many anxious minutes, was followed by a slow resuscitation, and a balmy slumber and perspiration. This last bleeding seemed to crush the monster disease, but really, at one time, it appeared like verifying the writer's therapeutic plan, as the poor woman seemed to have been bled to death. The swoon and bleeding together arrested the progress of the utero-peritonitis, no doubt, as the woman never complained of pain, very slight tenderness of the abdomen, and fever after recovering from the last swoon. To hasten resolution, which it was hoped would now soon commence, in the inflamed organs, after the woman awoke hot fomentations were freely employed over the tumid abdomen, which had already become softer, with directions to continue them until free diaphoresis was established. And as the sweating began to subside, the entire tumefied abdomen was directed to be freely embrocated with warm spirits of turpentine and tincture of gum camphor, and immediately invested with an epispastic.

Although the case had assumed quite favorable appearances, it was not deemed safe to withhold blistering, as the time was too short since the moderation of the symptoms to justify even the hope that resolution had gained so far upon the inflammation as to render the organs self-protecting against recrudescence of it.

After the epispastic was applied, and a few moments of rest, an active cathartic of salts, senna and 10 grains of jalap was administered. A tisane of cold pine leaves tea, with teaspoonful doses of dulcid nitre added occasionally, was directed in reference to its diuretic action, as the urinary secretion was defective; and also as an emmenagogue to re-excite the lochial flow. As drinks, cold water or cold mucilaginous infusions were allowed. Even ice was permitted. Light liquid nourishment in small quantities was only allowed. The case was now left in the care of good nurses, who had been fully instructed as to its management, until the writer returned the next day.

At the visit next morning, the writer found the woman greatly better. Notwithstanding the drawing of the extensive blister and the free action of the cathartic, she had a good night's rest. The abdominal swelling had abated considerably, as well as the tenderness; and the fever which existed seemed due to the irritation of the blister, as it consisted chiefly in acceleration of the pulse, while there was no firmness of it, and want of undue heat of the skin, as well as absence of thirst. Not the slightest pain of the abdomen was felt or complained of. The skin was soft, and very nearly of the natural temperature; the thirst, which had been so distressing, had ceased; the tongue was moist; the kidneys, bladder and uterus had resumed, in a great degree, their normal exercises; the woman was cheerful, and had quite a good appetite for one who, not more than fifteen hours before, had been so ill. The blister was not very painful, although so extensive; it discharged quite freely, and very probably in that way co-operated with the reparative powers in reducing the abdominal swellings in a very great degree.

The case now seemed in a condition to be managed by good nursing; and as the writer resided ten or twelve miles from the patient, and could not visit that distance daily unless absolutely necessary, it was left in the care of an intelligent and trustworthy nurse, with particular directions how to manage the case in all respects, but more especially as related to the regulation of the bowels, diet, variable temperature, conversation, and too early attempts at getting up. The writer only paid two visits more, after intervals of two days, finding the woman rapidly recovering, without the slightest threatening of a relapse; and he was informed, after his visits were discontinued, that a perfect recovery soon took place.

It will be perceived from the case treated by the writer, just referred to, that he regards puerperal fever an inflammatory disease; and the decisive method he adopted in treating it being antiphlogistic in the highest degree, it may be inferred that he believes no other plan can be safely relied on, and such is his fixed and candid opinion now, after the experience of many years. The chief fault in the employment of the antiphlogistic method is in too long delaying it; and another, nearly as important, is in not prosecuting it with sufficient energy after commencing it.

In concluding this paper, the writer would state that his chief object in preparing it is to urge his brethren to study child-bed fever more earnestly, and especially in reference to the condition of the organs concerned in pregnancy and parturition before and after delivery, as he believes it to furnish the chief element in the causation of puerperal fever. And he entreats them in behalf of their mothers, sisters, aunts, cousins, and women universally, to give purging a fair trial, as advised in this paper, as a means of preventing child-bed fever.

ART. II.—*Researches on the Relations of the African Slave-Trade in the West Indies and Tropical America to Yellow Fever.* By JOSEPH JONES, M. D., Professor of Chemistry and Clinical Medicine in the Medical Department of the University of Louisiana, Visiting Physician to Charity Hospital, &c., New Orleans, La.

If the history of yellow fever in the Western Hemisphere be considered in a general way, it will be found that the accounts and dates of its origin vary with the extent and character of the information of the writers in different localities and in different nationalities. Thus, some have referred the origin of the disease to the crowded African slavers, with their freights of suffering and enslaved humanity. The French writers, on the other hand, call the disease *mal de Siam*, holding the tradition that the disease had been imported in the ship *Oriflamme*, which is said to have sailed with the French colonists from Siam in the latter part of the year 1690, or, according to some writers, in 1686. Others regard the disease as having originated in the East, and to be a modified form of the Oriental plague. Some of the Spanish writers hold, with Alexander Humboldt, that the vomito is indigenous to the Antilles and Central America, and that it has prevailed ever since European adventurers flocked to the Western Hemisphere after its discovery by Columbus in 1492.

Within a few years after the discovery of the West India Islands by the Spaniards, the mild and unsuspecting natives had, for the greater part, perished. Millions of them were swept from the face of the earth by reason of the cruelty and avarice of desperate, immoral and murderous adventurers from the West. Bensini states that of 2,000,000 Indians of the

Island of Hispaniola (St. Domingo or Hayti), when discovered by Columbus in 1492, not more than 150 were alive in 1545. In 1558, it is stated that the native inhabitants of Jamaica had entirely perished; and Gage,* writing in 1637, says: "This island was once very populous, but is now almost destitute of Indians, for the Spaniards have slain in it more than 60,000; insomuch that women, as well here as on the Continent, did kill their children before they had given them birth, that the issues of their bodies might not serve so cruel a nation." The Spaniards are said absolutely to have fed their dogs on the flesh of their fellow human creatures, whom they shot or slew when their bodies were required.

In the eloquent language of Abbé Raynal,† "the conquered and unoffending natives of the West Indies were indiscriminately chained together like beasts. Those who sank under their burdens were compelled to rise by blows. No intercourse passed between the sexes except by stealth. The men perished in the mines, and the women in the fields, which they cultivated with their weak hands. Their constitutions, already exhausted with excessive labour, were still farther impaired by an unwholesome and scanty diet. The mothers expired with hunger and fatigue, pressing their dead and dying infants to their breasts, shrivelled and contracted for the want of a proper supply of milk. The fathers either poisoned themselves, or hanged themselves on those very trees on which they had just before seen their wives or their children expire. The whole race became extinct."

Some return for the cruelties practised upon her indigenous inhabitants has been made by America, to the conquering Europeans. And one‡ who has carefully studied the pages of West India history, which chronicles the deeds of three hundred years, says: "I find nothing but wars, usurpations, crimes, misery and vice;—no green spot in the desert of human wretchedness on which the mind of a philanthropist would love to dwell—all, all is one revolting scene of infamy, blood-shed and unmitigated woe." At one time, the Spaniards possessed entirely the Floridas, Mexico, Darien, Buenos Ayres, Paraguay, Chili, Peru and California; they are now utterly expelled from every one of these possessions, their dominion execrated, and new and

**New Survey of the West Indies.* By Thos. Gage, London, 1699.

†*History of East and West Indies*, vol. iii, p. 270.

‡R. Montgomery Martin, *Hist. British Colonies*, vol. ii, Introd. viii-ix.

flourishing republics are rising on the ruins of their once valuable colonies.

When the Spaniards found how rapidly the aboriginal population of the West India Islands perished under the system of forced labor, and beneath the tyranny of their rule, the expedient of introducing negro slaves from Africa was resorted to. The example of the Spaniards was soon followed by the Portuguese, Dutch, French and English; companies for the traffic were formed, monopolies granted, and Kings, Queens, Princes and Nobles enriched their coffers with the price of human blood. Before the close of the sixteenth century, the African slave-trade was carried on by natives of nearly all the maritime States of Europe, and, in after times, with great vigor by the United States of America, the great majority of the "slavers" from this country being fitted out, equipped, provisioned and manned in the ports of the Northern and New England States. For three centuries, the most civilized of the European nations prosecuted a sanguinary traffic in human beings on the coasts of Western Africa, dragged into bondage upwards of 25,000,000 of her unfortunate children; and of this large number carried to the West Indies, but 1,000,000 of the original slaves, or of their unmixed descendants, are now in existence.

The following observations embrace the most important facts developed by our researches, established with the design of determining the connection of yellow fever with the African slave-trade.

In the year 1442, while the Portuguese* were exploring the coasts of Africa, Anthony Gonsalez, who, two years before, had seized some Moors near Cape Bojardi, was, by Prince Henry, ordered to carry his prisoners back to Africa. He landed them at *Rio del Oro*, and received from the Moors in exchange ten blacks and a quantity of gold dust, with which he returned to Lisbon. The success of Gonsalez not only awakened the admiration, but stimulated the avarice of his countrymen, who, in the course of a few succeeding years, fitted out no less than 37 ships in pursuit of the same traffic. In 1481, the Portuguese built a fort on the Gold coast, another some time afterwards on the Island of Arguin, and a third at Lorango Saint Pauls, on

**Hist. Brit. Colonies West Indies.* Edwards, vol. ii, pp. 239-262.

the coast of Angola; and the King of Portugal took the title of Lord of Guinea. So early as the year 1502, the Spaniards began to employ a few negroes in the mines of Hispaniola; but in the year following, the Governor of that Island forbade the further importation of them, alleging that they taught the Indians all manner of wickedness, and rendered them less tractable than formerly.* So rapid, however, was the decrease of the unfortunate natives, as to induce the Court of Spain, a few years afterwards, to revoke the orders issued by Oriando, and to authorize, by royal authority, the introduction of African slaves from the Portuguese settlements on the coasts of Guinea. In the year 1517, Emperor, Charles V, granted a patent to certain persons for the exclusive supply of 4,000 negroes annually, to the islands of Hispaniola, Cuba, Jamaica and Puerto Rico. This patent having been supplied to some Genoese merchants, the supply of negroes to the Spanish American plantations became from that time an established and regular branch of commerce.

Of the English, the first who is known to have been concerned in this commerce was the celebrated John Hawkins, who afterwards received from Queen Elizabeth the honor of knighthood, and was made treasurer of the navy, having made several voyages to the Canary islands, and there received information (says Hakley) "that negroes were very good merchandise in Hispaniola, and that slavers of negroes might easily be had on the coast of Guinea, he resolved to make trial thereof, and communicated that device, with his worshipful friends of London, Sir Lionel Duckel, Sir Thomas Lodge, Master Gunson (his father-in-law) Sir William Winter, Master Bromfield, and others, all which persons liked so well of his intention, that they became liberal contributors and adventurers in the action, for which purpose there were three good ships immediately provided; the Salmon of 120 tons, wherein Master Hawkins himself went as general; the Swallow, of 100 tons, and the Ilnos, a bark of 40 tons; in which small fleet Master Hawkins took with him 100 men. Hawkins sailed from England for Sierra Luna, in the month of October 1562, and arrived back in England in September 1563, after a very prosperous voyage, which brought great profit to the adventurers by the sale of some 300 negroes, captured only by the sword and other means, in Hispaniola." The success

Henera deced. 1. lit. 5. c. 12.

which attended this first expedition for the traffic in human beings, appears to have attracted the notice and excited the avarice of the British government; for Hawkins, in the year following, was appointed to the command of one of the four ships—the Jesus, of 700 tons—and was sent with two other ships on the same slave-trading expedition. Hawkins made a third voyage to Africa in 1568, for the same purpose, with a squadron of six ships, which terminated miserably, and put a stop, for some years, to any more piratical expeditions of the English to the coast of Africa.

The first attempt by the British nation to establish a regular trade on the African coast in 1618, under the auspices of James I, was not successful, the profit not being found to answer expectation. In 1637, after the English had begun their settlement of plantations in the West Indies, negroes were in such demand as to induce the formation of a new company for the prosecution of the African slave-trade; and King Charles I granted to Sir Richard Young, Sir Kenelm Digby, and sundry merchants, the exclusive right to enjoy the sole trade to the coast of Guinea, between Cape Blanco and the Cape of Good Hope, together with the isles adjacent, for thirty-one years.

It is not my purpose to enter into any detailed account of the various voyages, or of the conduct of the different companies formed for the prosecution of the African slave-trade; what has been quoted is sufficient to demonstrate that the Portuguese established the slave-trade before the discovery of America by Columbus; that as early as 1502, the Spaniards began to employ negroes in the mines of Hispaniola; and that a regular traffic in slaves had been established so early as the year 1564, by several nations, as the Portuguese, Spaniards, French and English.

It appears that the British slave-trade had attained to its highest pitch of prosperity a short time before the commencement of the American War, and the total import into all the British colonies of America, or the West Indies, from 1680 to 1786, has been, on a moderate calculation, 2,130,000, being on an average of the whole, 20,095 annually.

Of the diseases developed amongst these miserable people, whilst confined in the slave marts of the African coast, and upon the crowded and filthy slavers during their horrible passage

across the Atlantic, we have only imperfect accounts. In 1669 a fatal epidemic fever prevailed in St. Domingo, and its introduction was ascribed to slave ships from the coast of Africa, and the local authorities passed ordinances to prevent the introduction of contagious and malignant fevers by means of slaves. (*Moreau de Jonnés*, p. 58–59).

We extract the following observations upon the conduct of the slave-trade and the diseases of the negroes in the West India islands, from the valuable work of Bryan Edwards. (*Hist. West India*, vol. ii, p. 328):

"It is admitted on all hands that the men slaves are secured in irons when they first come on board; but Sir George Young, a captain in the Royal Navy, who appears to be well acquainted with the trade in all its branches, is of opinion that this is not practised more than necessity requires. The mode is of fastening every two men together, the right ankle of one being locked by means of a small iron fetter to the left of the other, and if marks of a turbulent disposition appear, an additional fetter is put on their waists. On the passage, when danger is no longer apprehended, these irons are commonly taken off; and women and young people are exempt from the beginning.* Many are lodged between decks, on clean boards, the men and women being separated from each other by bulk-heads; and fresh air is admitted by means of windsails or ventilators. Covering of any kind, as well from the warmth of the climate as from the constant practice of going naked, would be insupportable to them. Every morning, if the weather permits, they are brought upon deck, and allowed to continue there until evening. Their apartments, in the meantime, are washed, scraped, fumigated, and sprinkled with vinegar. The first attention paid them in the morning is to supply them with water to wash their hands and faces, after which they are provided with their morning meal; this, according to the country from whence they come, consists either of Indian corn or of rice or yams. Before noon, they are constantly and regularly made to bathe in salt water; and nothing can be more agreeable and refreshing. Their dinner is varied, consisting sometimes of food to which they have been accustomed in Africa, as yams and Indian corn, &c., and at other times of provisions brought from Europe, as dried beans and peas, wheat, shelled barley, and biscuit. All these are boiled soft in steam, and mixed up with a sauce made of meat with fish or palm oil; this last is a constant and desirable article in their

*The bulk of the cargo is generally young people, from 16 years old to 30.

cookery. At each meal they are allowed as much as they can eat, and have likewise a sufficiency of fresh water; unless, when, from an uncommonly long voyage the preservation of the ship compels the captain to put them to a short allowance. Drams are also given them when the weather is cold or wet, and pipes and tobacco whenever they desire them. In the intervals between their meals, they are encouraged to amuse themselves with music and dancing, for which purpose such rude and uncouth instruments as are used in Africa are collected before their departure; and they are also permitted to amuse themselves with games of chance, for which they are likewise furnished with implements of African invention. In sickness, the invalids are immediately removed to the captain's cabin, or to a hospital built near the forecastle, and treated with all the care, both in regard to medicine and food, that circumstances will admit; and when, fortunately for the negroes, the ship touches at any place in her voyage, as frequently happens, any refreshments that the country affords, as cocoa-nuts, oranges, limes, and other fruits, with vegetables of all sorts, are distributed among them; and refreshments of the same kind are freely allowed them at the place of their destination, between the days of arrival and sail."

"At the ports of Montego Bay, in Jamaica, the negroes imported between the 18th day of November, 1789, and the 15th of July, 1791, were 9,993, in 38 ships; the mortality at sea, exclusive of the loss of 54 negroes in a mutiny on the coast, was 746, which is somewhat under 7 per cent. of the whole number of slaves. This, though much less, I believe, than the average loss which happened before the regulating law took place, is, I admit, sufficiently great; and had it prevailed in any degree *equally* on the several ships concerned, might, perhaps, have been considered as a fair estimate of the general mortality consequent in the trade, notwithstanding the peculiarities and provisions of the regulating act. But on examining the list, I find that eight of the 38 ships were entitled to, and actually received the full premium; two others received the half premium, and one other (a schooner that sailed from Jamaica to the coast before the act took place), returned without the loss of a single negro. Of the 746 deaths, no less than 328 occurred in four ships only, all of which, with five other vessels, comprehending the whole number of ships in which three-fifths of the mortality occurred, came from the same part of the coast, the Bight of Berin; a circumstance that gives room to conclude (as was undoubtedly the fact) that the negroes from that part of the country brought disease and contagion with them from the land; an epidemic fever and flux generally prevailing on the low, marshy

shores of Bonny rivers during the autumnal months, which sometimes proves even more destructive on shore than at sea," pp. 332–333.

It is difficult to determine from this description whether the epidemic contagious fever and flux, here alluded to as prevailing on the low marshy shores of the Bonny Rivers, attacked the natives, or only those Europeans engaged in the slave-trade. It is well established that the negroes are not, as a general rule, subject to yellow fever either upon the Coast of Africa or in the tropical regions. They have suffered, however, to a certain extent, from this disease in some epidemics, and it is possible that they may have suffered from this fever when subjected to the foul atmosphere of the slaver. It appeared in evidence before the House of Commons, that before the passage of the regulating act, a ship of 240 tons would frequently be crowded with no less than 520 slaves; which was but allowing ten inches of room to each individual. The consequence of this barbarous avarice was oftimes a loss of 15 per cent. in the voyage and $4\frac{1}{2}$ per cent. more in the harbors of the West Indies, previous to the sale, from diseases contracted at sea.

It has been held by many writers that in the crowded slave ships, and in all others similarly situated in the tropical regions, the necessary condition existed for the origin of yellow fever *de novo* at any time. Thus Dr. William Currie, in his *View of the Diseases most Prevalent in the U. S. of America*—Phila: 1811, p. 60, says with reference to the origin of yellow malignant fever:

"I am convinced that it is a contagious disease, and that every time it has appeared in this country, the contagion by which it is propagated has been imported from some of the West India Islands, in the persons of the sick, or in articles of clothing, or bedding, that have been used by the sick; but from what cause the contagion proceeds, or is originally produced, I do not pretend to know with absolute certainty; though I am inclined to believe, from the facts which have been recorded by different authors, particularly by the Jesuit Pere Tafat, Drs. Des Tortes, Dalzille, the Rev. G. Hughes, Don Ullva, Dr. Röuppe, Dr. Scholle and more recently by Dr. Chisolm, that the contagion of this disease is only generated on board of foul or crowded transports or ships-of-war, after long confinement in hot climates; and that it is produced by the joint operation of the exhalations from living human beings in an impaired state of health; and the exhalations

from the corrupted bilge-water confined in the ship's hold and wells, particularly during the rainy season, where, from the necessity of keeping the hatches shut, fresh air is in a great measure excluded, cleanliness neglected, and noxious exhalations permitted to accumulate. The disease has never been known to make its first appearance on shore in tropical climates, owing, I presume, to the want of a concurrence of all the circumstances which sometimes occur on ship-board."

Few voyages were more destructive to the seamen than that of Lord Anson, and none less so than that of Captain Cook; an incontestable proof that the mortality which has commonly occurred at sea has at all times resulted from ill-constructed ships, bad diet, salt meats, crowding, neglect, improper management on board.

Bryan Edwards makes no mention of yellow fever amongst the diseases of the negroes in the West Indies; thus he says,

"Among the diseases which negroes bring with them from Africa, the most loathsome are the *cacaba* and the *yaws*; and it is difficult to say which is the worst. The former is the leprosy of the Arabians, and the latter (much the more common) is supposed, by some writers, to be the leprosy mentioned in Leviticus cxiii. Both are very accurately described by Dr. Hillary, in his 'Observations upon the Diseases of Barbadoes.' Young negro children often catch the yaws, and get through it without medicine or much inconvenience. At a later period it is seldom or never thoroughly eradicated and as, like the small-pox, it is never had but once, the Gold-Coast negroes are said to communicate the infection to their infants by inoculation. I very much doubt if medicine of any kind is of use in this disease. But the greatest mortality among the negroes in the West Indies arises from two other complaints, the one affecting infants between the 5th and 14th days after their birth, and of which it is supposed that one-fourth of all the negro children perish. It is a species of *tetanus* or locked-jaw; but both the cause of it in these poor children, and the remedy remain yet to be discovered. The other complaint affects adults, or rather negroes who are past their prime. They become dropsical and complain of a constant uneasiness in the stomach; for which they find temporary relief in eating some kind of earth. The French planters call this disease *mal d' estomac*, or the stomach-evil. I have formerly heard of owners and managers who were so ignorant and savage as to attempt the cure by severe punishment, considering *dirt-eating* not as a disease but a crime. I hope the race is extinct. The best and only remedy is kind usage and wholesome animal food; and

perhaps still drinks may be of some service. Of one poor fellow in this complaint, I myself made a perfect cure by persisting some time in this method." *Hist. West Indies*, vol. ii: p. 352.

The testimony of Abbé Raynal, in his *Philosophical and Political History of the Europeans in the East and West Indies*, with reference to the diseases of the negroes in the West Indies, corresponds with that of Edwards.

Thus he says that the African slaves in the West Indies "are particularly subject to two diseases, the yaws and that complaint that affects their stomach. The first effect of this last disorder is, to turn their skin and complexion to an olive color. Their tongue becomes white, and they are overpowered by such a desire for sleeping that they cannot resist: they grow faint, and are incapable of the least exercise. It is a langour, and general relaxation of the whole machine. In this situation they are in such a state of despondence, that they suffer themselves to be knocked down, rather than walk. The loathing which they have of mild and wholesome food, is attended with a kind of rage for everything that is salted or spiced. Their legs swell, their breath is obstructed, and few of them survive this disorder. The greater part die of suffocation, after having suffered and languished for several months." Vol V: London, 1788; p. 271.

"The yaws, which is the second disorder peculiar to negroes, and which accompanies them from Africa to America, is contracted in the birth, or by communication between the sexes. No age is free from it, but it more particularly attacks at the period of infancy and youth. Old people have seldom strength sufficient to support the long and violent treatment which it requires.

"There are said to be four species of the yaws. The yaws with pustules, large and small, as in small-pox; that which resembles lentils; and lastly the red yaws which is the most dangerous of all.

"The yaws attack every part of the body, but more especially the face. It manifests itself by granulated red spots resembling a raspberry. These spots degenerate into sordid ulcers, and the disorder at length affects the bones. It is not in general attended with much sensibility.

"Fevers seldom attack the persons who are afflicted with the yaws; they eat and drink as usual, but they have an almost insuperable aversion for every kind of motion, without which, however, no cure can be expected. p. xx.

"All the negroes, as well male as female, who come from Guinea, or are born in the Islands, have the yaws once in their lives: it is a disease they must necessarily pass through, but there is no instance of any of them being attacked with it a second time

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after having been radically cured. The Europeans seldom or never catch the disease, notwithstanding the frequent and daily connection which they have with the negro women. These women suckle the children of the white people but do not give them the yaws. How is it poseible to reconcile these facts, which are incontestible, with the system which physicians seem to have adopted with regard to the nature of the yaws? Can it be allowed that the semen, the blood, and the skin of the negroes are susceptible of a virus peculiar to their species? The cause of this disorder is the same as that which occasions their colour; one difference is naturally productive of another: and there is no being or quality that exists absolutely detached from others in nature.

"But whatever this disorder may be, it is demonstrated that 1,400,000 or 1,500,000 blacks, who are now dispersed over the European colonies of the new-world are the unfortunate remains of 8,000,000 or 9,000,000 of slaves that have been conveyed there. This dreadful destruction cannot be the effects of the climate, which is nearly the same as that of Africa, much less of the disorders, to which, in the opinion of all observers, but few fall a sacrifice." Vol. v. pp. 272–4.

It is evident from the statements that the diseases of the negroes were peculiar, and that they were not subject, either in Africa or in the West Indies to the fevers which were destructive to the white race. Thus when speaking of the diseases of the white inhabitants of the West Indies, Abbé Raynal says:

"In this vicinity of the Equator they are referred to a hot and malignant fever, known under different names, and indicated by hemorrhages. The blood which is boiling under the fervent rays of the sun is discharged from the nose, eyes, and other parts of the body. Nature in temperate climates, does not move with such rapidity but that in the most acute disorders there is time to observe and follow the course she takes. In the Islands, her progress is so rapid, that if we delay to attack the disorder as soon as it appears, its effects are certainly fatal. No sooner is a person seized with sickness, but the physician, the lawyer, and the priest are called to the bed-side.

"The symptoms of this terrible illness seem to indicate the necessity of bleeding. This operation hath therefore been repeated without measure, several experiments have at length demonstrated that this experiment was fatal. Remedies are now preferred which are capable of moderating this great rarefacation of the blood, and which tend to the dissolution of it. Such as bathing, glysters, oxycrates, and even blisters, when the disorder is attended with delirium. We have known a professional man of

great understanding, who thought that the immediate cause of this malady was the intense heat of the sun, and who affirmed, that those who did not expose themselves to it, most commonly escaped this calamity. xxx.

"Almost all the Europeans who go over to America are exposed to this danger, and frequently the Creoles themselves, on their return from more temperate climates. But it never attacks women whose blood has the natural evacuations, and negroes, who, born under a hotter climate, are inured by nature, and are prepared by free perspiration, for all the ferments that the sun can produce. These violent fevers are certainly owing to the heat of the sun, the rays of which are less oblique, and more constant than in our climate. xxx.

"In the present state of the colonies, of ten men that go into the islands, four English die; three French, three Dutch, three Danes, and one Spaniard. When it was observed how many men were lost in these regions, at the time they were first occupied, it was generally thought, that the States who had the ambition of settling them would be depopulated in the end." Vol. v. pp. 350–353.

M. Dalzille, in his valuable and elaborate work, *Observations sur Maladies des Négres*, refers the diseases of the Europeans in the West Indies, chiefly to the effects of heat and the stagnant marshes, and associates their production with the causes which favor the development and multiplication of animalculæ. In his observations upon the fevers of the negroes of the West Indies and more especially of St. Dominique contained chiefly in chap. I. of vol. I., under the head of *fievres putrides*, he describes the various forms of *malarial paroxysmal fever*, and fails to mention yellow fever. The chief diseases which according to his account afflict the negroes, are yaws, leprosy; peripneumonic, maladies vénerienne, maladies vermineuses, mal d' estomac, smallpox, rougerle, (measles,) and tetanos.

Dr. William Hillary, a pupil of the celebrated Boerhaave, and a close observer of disease and an extensive and successful practitioner of medicine, in his *Observations in the Changes of the Air, and the Concomitant Epidemical Diseases on the Island of Barbadoes*, in his *Treatise on such Diseases as are most Frequent in, or are Peculiar to the West Indies or the Torrid Zone*, whilst recording accurate descriptions of these diseases as the yaws and leprosy, peculiar to the negroes, makes no allusion to the prevalence of yellow fever amongst them, nor to the importation of

this disease from Africa. Thus in his chapter on "*The Putrid Bilious Fever, Commonly Called the Yellow Fever*," he says that:

"From the best and most authentic accounts that I can obtain, as also from the nature and symptoms of the disease, it appears to be a fever that is indigenous to the West India Islands, and the continent of America, which is situated between, or near the tropics, and most probably to all other countries within the torrid zone. But I cannot conceive what were the motives which induced a late ingenious author (Dr. Warren), to think that this fever was first brought from Palestine to Marseilles, and from thence to Martinique and so to the Barbadoes, about thirty-seven years since. A better inquiry would have informed him, that this fever had frequently appeared in this and other West India Islands many years before: for several judicious practitioners, who were then and now are living here, whose business was visiting the sick the greatest part of their life-time, some of them almost eighty years of age, remember to have seen this fever frequently in this island, not only many years before that time, but many years before that learned gentleman came to it.

The same author supposes this fever to be of the pestilential kind, but his reasons for it are chiefly founded on the same supposition, that it proceeded from the plague then raging at Marseilles. But a more strict inquiry into the nature and symptoms, and a better examination of the state of the blood of those who labour under it, would have sufficiently shewn him that it was a very different fever—I may also add its not spreading and infecting others, as the plague always does. For this fever very rarely or never is infectious or contagious to others, not even to those who attend the sick, except a chance time, when it is in its most putrid, malignant state, at the latter end of the disease; or soon after the death of the patient, when the season is very hot, and this fever is accompanied with the symptoms of some other malignant fever which is then epidemical and contagious, as happened once at Antigua, and once or twice in the island; and the same may probably have happened in some other places. But I never could observe any one instance where I could say that one person was infected by, or received this fever from another person who had it; neither have I ever seen two people sick of this fever in the same house, at or near the same time, unless they were brought into the same house, when they had the fever upon them before they came. From whence we may conclude that it has nothing of a contagious or pestilential nature in it; and that it is a very different fever in all respects," pp 106–107.

Dr. Benjamin Rush, who edited the works of Dr. Hillary, in commenting upon the preceding statement, observes:

"We have here a testimony against the non contagiousness of the yellow fever, by an eminent physician, who resided many years in one of those islands from which the disease has been said to be exported. It is probable, in the few cases in which this fever was said to be contagious, there was a mixture of the jail or ship fever with it; or the yellow fever may have been so protracted as to generate that matter which has been called 'contagion of excretion.'"

Dr. Hillary farther says that "It is remarkable that this fever most commonly seizes strangers, especially those who come from a colder or more temporate climate to this much warmer; and most readily those who use vinous or spirituous liquors too freely; and still more readily those who labour hard or use too violent exercise, and are at the same time exposed to the influence of the searching rays of the sun in the day-time, and dews and damp air of the night, and especially if they drink spirituous liquors too freely at the same time; hence, the poor unthinking sailors too frequently become a prey to this too often fatal disease.

It does not appear from the most accurate observations of the variations of the weather or any difference of the seasons which I have been able to make for several years past, that this fever is in any way caused or influenced by them; for I have seen it at all times, and in all seasons of the year, in the coolest as well as in the hottest times of the year; except that I have always observed that the symptoms of this (as well as most other fevers) are generally more acute, and the fever usually higher, in a very hot season, especially if it was preceded by warm, moist weather, than it usually is when it is more cool." pp. 107–108.

The testimony of Dr. Hillary is of importance, especially as he has given one of the most accurate descriptions of yellow fever extant.

Dr. Lind, in his *Treatise on the Jail Distemper*, says, with reference to the diseases of the slave-ships:

"The poor wretches are crowded together below the deck, as close as they possibly can be, with only a small separation between the men and women. Every night they are shut up under close hatches, in a sultry climate, barred down with iron to prevent an insurrection; and though some have been suffocated by this close confinement in foul air, though they are subject to the flux, and suffer from a change of climate, yet an infection is scarcely known among them; or if an *accidental* fever, occurring from the change of climate, should become infectious, it is generally much more mild than in the opposite situation."—*On Preserving the Health of Seamen.* Sec. ed. p. 317–318.

Dr. Thomas Trotter, who was himself surgeon to a slave-ship, says:

The situation of the African negroes confined during the middle passage, in the slave rooms of a guineaman, has been mentioned by Dr. Lind. The confinement of so many irrational creatures in a small space, deservedly attracted the animadversions of a physician investigating the sources and progress of contagion. But contagious fevers, we find, are not their diseases. We can well believe that if the negroes were clothed that filth and uncleanness might generate infection; the excessive quantity of perishable matter emitted from the surface in a high degree of heat, would soon accumulate, and adhering to linen or woolen cloths might at least propagate forms of disease. But the matter being daily washed from their skins, and the rooms kept clean, nothing offensive or of an animal origin is allowed to undergo the final decomposition, which it would do in nasty and unventilated clothing. Thus also the poor inhabitants of warm countries are free from the diseases of those in colder regions." *Medicina Nautica: An Essay on the Diseases of Seamen*, 2d ed., vol. i, p. 184.

Dr. Garden, in a letter to Rev. Stephen Hayes, D. D., dated Charlestown, South Carolina, March 24th, 1756, after mentioning the Guinea slave ships arriving there, adds:

"I have often gone to visit these vessels on their first arrival, in order to make a report of their state of health to the Governor and Council; but I never yet was on board one that did not smell most offensive and noisesome: what from filth, putrid air, putrid dysenteries (which is their common disorder), it is a wonder that any escape with life." Hale's *Treatise on Ventilators*, 2d part, p. 95.

Dr. Edward Nathaniel Bancroft gives the most decided testimony against the origin of yellow fever in the African slaves. Thus he observes:

"Dr. Lind, influenced as he was by the commonly received opinions, mentions an infection (meaning a fever) as being scarcely known in the slave-ships, instead of asserting, as he might have done with truth, that it is *never known;* for after very extensive inquiries, I am fully convinced that fever of any kind rarely occurs on board these vessels, and *contagious fever* never; though great mortality has frequently happened from other diseases, and more especially from dysentery." *Essay on Yellow Fever.* London, 1811, p. 128.

We conclude, therefore, from the preceding researches, *that*

yellow fever is not a disease of the African race, in tropical climates, and that the origin and propagation of the disease in Insular and Central America, cannot be traced to the African slave-trade.

ART. III.—*Dilatation of the Os Uteri as a Cure for Sterility.* By A. W. FONTAINE, M. D., New Canton, Va.

About six years ago my attention was forcibly attracted to this subject by an article in the *Richmond & Louisville Med. Jour.* Having at that time some cases of obstructive dysmenorrhœa among married women, I determined to test the efficacy of the process proposed. The results in such cases as I can now remember are given below:

I. Ann B., colored; married seven years; never conceived. Since marriage her general health had failed: lost flesh and spirits; looked pale, thin and ashy; dark under the eyes. Menstruation had become more and more painful and difficult, and had finally ceased for some months; for which reason I was called to see her. On vaginal examination, found uterus low in the pelvis, and much engorged. After much patient, gentle perseverance I succeeded in passing a very small silver female catheter through the os and cervix, which was allowed to remain several hours. A day or two afterwards, a No. 8 gum catheter was introduced, and so on, every few days a larger one, until a No. 12 was easily passed. Soon after this, the menstrual epoch arrived, and she had a free and easy flow. In the meantime she had taken ferruginous tonics and aloine laxitives combined, which had much improved her general health and appearance. About four months from this last menstruation, I was consulted again for the same trouble, as she thought, and found her about *three months pregnant.*

II. Susan, wife of Hamlet J., aged about 23; married five years; no conception. Health failed, and she presented much of the appearance and situation of case I. Treated by tonics, iron, quinine, strychnia. Locally, persevering dilatation with bougies, and the use of a Hodge's pessary. After a few months she conceived, and has had no such difficulty since for more than three years.

III. Lucy, wife of J. A. B.; married to her present husband over two years. Had a child (by former husband) then upwards of three years old. Been sick ever since last marriage—first, intermittent fever; then indigestion and constipation; then slight attack of cerebro-spinal meningitis, to attend which I was called.

During convalescence from meningitis, she told me how weak, nervous and hysterical she had become, and that she had "seen nothing" for over eight months. Vaginal examination revealed a prolapsed uterus, with its mouth nearly closed by cervical engorgement. Treatment: Dilatation; free use of astringents locally, and a Hodge's pessary, with tonics, set her up again. In a few months she was well, and had conceived. (Let me say here that as steady pressure from without inwardly for the relief of local congestions and engorgements is a well known and approved surgical procedure, so the same, when applied inversely, is from within outwards.)

IV. Susan, wife of H. J., 34 years old. Had no child for 12 years. General health had been very good, although her menstruation had been irregular and painful, "like having children," most of the time. This immunity from general disorder and break-down, perhaps, was due to an uncommon physical hardihood and a very equable temperament. Examination presented a prolapsed uterus, with a hardened and hypertrophied neck, having a *very narrow* cervical canal. Treatment purely local; dilatation; cold injections; and a suitable pessary. Results: Conception within the year; a fine child; another since; and good health all the time.

V. Mrs. A., in an adjoining county. This lady was just past 40 years of age; married nineteen years. Lost her only child *seventeen* years before. Had never conceived since. She was a stoutly built woman, inclined to be fleshy, of dark complexion, and bilio-phlegmatic temperament. Her health, too, had been very good, with the exception of occasional intermittent fever, or some temporary biliary disorder. Her menstruation, however, had, for most of the time, been a source of trouble, and sometimes of distress to her; and she had finally concluded that she would "never be quite right in that respect;" hence, was looking forward to the "change of life" as her only hope of ultimate relief from such annoyance. Upon the occasion of my visit, she had just returned by boat from Richmond, and on her way home had a very painful and nearly abortive attempt at menstruation, during which she slipped into the canal and got her feet wet. Taking severe cold, she was laid up; had considerable fever, sore throat, harsh, dry cough, and much pain in the loins and lower abdomen, which last was so much aggravated by the coughing as to cause very great suffering. The menstrual flow, scant as it had been, was *suddenly* stopped, and there was exquisite tenderness over the region of the womb. Having administered such antiphlogistic and soothing remedies as her case seemed to require, I was about to leave her for the present, when

her entreaties for some immediate relief induced me to make a very careful though somewhat painful examination *per vaginam.* The vagina was found to be hot and tender; the uterus was *heavily* engorged, and keenly sensitive to pressure. The external os was very small; the *internal* orifice so tightly closed as barely to admit a *common* probe. Dilatation was at once commenced with *that* little contrivance, and steadily pursued with instruments of gradually increasing sizes until the womb was enabled to empty itself, or nearly so, and thus the poor lady was relieved of her main distress. The great sensitiveness of the womb and vagina in her case made the proceeding more painful than in ordinary cases of chronic derangement, but far less so than she or I might have expected. She recovered in a few days, and I saw her no more until many months after, when visiting a neighbor of this lady, who asked me if I knew that "Mrs. A. was in the family way?" It was true; and in due time she was delivered of a large boy,

"His father's hope, and his mother's joy."

VI. Mrs. M. J. T., aged 23–4. This lady was yet unmarried at the time she came under treatment. She had been under my care at different times, and under close observation for several years. At first she was treated for chronic gastritis, dyspepsia, spinal complaint, &c. She received, apparently, some benefit each time, but was never *cured.* At last, after years of suffering, she fell into my hands again, about four years ago, and presented a truly pitiable spectacle. Emaciated to the last degree; eyes hollow and glassy, with a dark border all around; so thin and dry was she that the flesh seemed to adhere to the bones. Her digestion and assimilation were so feeble, and she took so little food, that it was marvelous how life had been sustained as long as it had, and it was quite evident that it could be sustained at that rate very little longer. She presented the same symptoms of gastro-intestinal weakness and general debility that marked her case before—only ten-fold worse. Upon inquiry, she informed me that it had been many months, perhaps more than a year, since she had any monthly show at all; that it had never been "quite like other girls'"—irregular, painful, and very scanty, until it finally ceased entirely. Having exhausted the vocabulary of internal and topical remedies for such cases, made and provided, she was informed that a vaginal examination and probable subsequent instrumentation (?) would have to be had. By the advice of parents and friends she submitted. A rigid contraction of the vagina itself made the examination very difficult, and when that was finally overcome, I had still more trouble in passing even the smallest probe through the os tincæ;

with this the dilatation was begun, and continued with instruments of graduated size, every few days for some months. At last, after reaching a No. 10 or 12 gum catheter, the menstrual molimen, which had ceased even to declare itself, came on, and with it a moderate flow of one or two days' duration. From this, she gradually improved, and in the course of a year her health was so far established that she got married, and in another year had a baby.

It is not claimed that this treatment cured a case of sterility (for the lady was not married), but it did better; it *prevented* it; and better than that, in all human probability it saved a life that has since multiplied itself. Her womb was atrophied, and obtunded as to its sensibilities.

VII. Jane (black), wife of J. W., has been married four years. No conception. Nearly ever since marriage had symptoms of fallen womb. The cervix was enlarged, turgid, and spongy to the feel. The uterus was depressed, as I believe all uteri are when in a state of chronic engorgement. The os was nearly impervious on account of the hyperæmic state of the cervix, which was also considerably elongated. Taken as a whole, this was about such a case as might demand amputation of the cervix as the shortest and, perhaps, best method of cure. Profuse and painful menstruation, varied by occasional suppression and leucorrhœa, were what she most complained of. Treatment: Rest and tonics, with cold astringent injections for a while—the womb supported by Hodge's lever pessary. After the leucorrhœa was cured, and the hyperæsthesia of the cervix abated, the cervix was found less turgid, and tender to the touch; but as the os was still smaller than natural, and caused the menstrual period to be very prolonged (sometimes two weeks) and often painful, I determined to dilate it. This was affected after much trouble, and continued from time to time for 18 or 20 months. The thickness of the cervix could be felt to diminish after each dilatation; the os became easily permeable, and last year she conceived—as *soon as menstruation became normal.*

Originally, this paper was only intended as a clinical report of cases, but upon reflection, I think the subject is of sufficient importance to justify a few remarks in conclusion—first, as to other and different uterine derangements to which this treatment is applicable; and second, as to the best means and method of its application.

Of the first, I need not say much; as for the last two or three years abler pens have been at work, and have left little that can

be so well said. The era of sponge and laminaria tents is somewhat subsequent to most of the cases here reported, and as a *means*, far excel the more primitive armament therein used. And these means, so palpably superior, have caused for themselves a more extended and intelligent application and proved their adaptability to very many and widely different pathological states of the os and cervix uteri. Among these, it may suffice to mention: every species and degree of *narrowing* of the cervical canal unaccompanied with acute inflammation or malignant disease; every species and degree of *distortion* (and consequent obstruction), whether produced by displacement or antecedent inflammation; and almost every instance of *hypertrophy* (simple), with *hardness* of the neck, may reasonably admit of benefit from systematic and persevering dilatation, with such adjuvants, general and local, as accord with the nature of each case. Menorrhagia, passive hemorrhages, &c., depending upon bleeding tumors and surfaces situated within the cervix, or even above it, as has been shown by a recent writer,* are amenable, and respond promptly and completely to this means of treatment.

Of the means and method of its application, I would only say that whilst it is admitted that sponge and laminaria tents by expansion dilate more rapidly and completely, yet we often meet with cases in which something smaller and longer is necessary to *begin with*. Here slippery-elm bark, dried and cut into strips of suitable size and length (as lately revived and recommended for bougies by Dr. Moncure, of Richmond, (*Va. Med. Monthly* for October, 1874), are admirably adapted, as I have recently found upon trial. Any and all of these may be applied by a hand of ordinary skill and tact without a speculum, or any expense to the patient, except the sponge tent, the introduction of which for the most part requires a speculum. The others can be introduced into the womb guided by the index and middle fingers of the left hand (raising and holding the os tincæ on their tips), and propelling the instrument with the right. If the sponge tent is not introduced *at once and directly* it is soon spoiled by rapid absorption of moisture and immediate expansion. It is to be hoped that ere long some other means than the speculum (to which wo-

*John Herbert Claiborne, M. D., Petersburg, Va. *Va. Med. Monthly*, April, 1874.

men so naturally object) will be invented and adapted for applying this most valuable and efficient little expander.

Now, as most of the cases of occlusion, contraction and distortion of the cervical canal are usually complicated by, and often dependent upon, some one of the many displacements of the uterus, how important is it to rectify all such mal-positions, and at the same time maintain a proper degree of permeability in that channel. The os tincæ, once well dilated, the intra-uterine stem pessary meets every indication, and answers every reasonable expectation—provided, of course, it be well fitted and applied, and there exist no complicated contra-indications to its use, such as excessive irritability, &c., in which event it were better for the patient to maintain the recumbent position, and irrigate the vagina and womb *perseveringly* with injections, either hot or cold. One or the other will surely modify most of such conditions, unless there be morbid growths or disorganizing tissues, until the instrument can be worn. Then a cure is almost certain.

There are other cases besides these reported here, but as I have no distinct recollection of the particulars, they are withheld. If there is among them a single case of sterility in a married woman, caused by abnormal narrowness of the cervical canal, treated fairly in this way, without a cure, I do not remember it. Nor is it presumed that my experience in this regard is singular, in these days of progressive gynæcology.

Clinical Reports.

A Case of Vicarious Menstruation (?). W. J. H. Bellamy, M. D., Wilmington, N. C. (Read before the New Hanover Co. [N. C.] Medical Association.)

Alice Ballard, married, mother of six children, was delivered April 22d, 1874; child still-born. About June 14th, I was requested to examine a tumor of several years' standing, located near the angle of the lower jaw on the right side, which extended upwards and was attached to the lobule of the ear. It had attained the size of an English walnut, was of a fibro-car-

tilaginous character, and firmly attached to the skin, but had no subcutaneous attachment whatever. The lobule of the ear was almost obliterated by the presence and attachment of the tumor. I advised its removal, and accordingly on June 17th, with Dr. Wood's assistance, the patient was thoroughly anæsthetized with about an ounce and a half of washed ether, and the tumor was removed without difficulty. Very little hemorrhage occurred, and in a few minutes the wound was brought together with ordinary sutures, and secured still further by good adhesive plaster.

Not a drop of blood escaped from the wound an hour afterwards, when the patient walked home, a distance of nearly a mile. Then the wound commenced bleeding, and the patient returned to my office for assistance. The dressing, with the exception of the stitches and plaster, was removed, but no blood could be seen issuing from the wound; yet, from the appearance of the compress and bandage, she must have lost at least an ounce since she left my office. After remaining awhile, and there being no sign of any further hemorrhage, I advised her to walk slowly home.

The next morning bleeding again commenced, and at 12 M., I was sent for, as I had requested her to do if hemorrhage ensued. Upon arrival, I found that the hemorrhage had been considerable, and was still kept up. I reluctantly removed the plaster and stitches and exposed the wound, using ice and Monsel's solution as hæmostatics, with no visible effect; sent for Dr. Wood, who soon arrived; by the use of torsion with ordinary forceps, the flow of blood was stopped. The wound was left open, and a compress saturated with Monsel's solution applied. 1 P. M. Left the patient, instructing her to send for me at any time that bleeding might recur.

At midnight I was sent for; found her weak and nervous from loss of blood, and sitting up in a chair. She stated that the hemorrhage had commenced two or three hours before, and that she refrained from sending for me, knowing that it was about bed-time, and she thought the bleeding might stop of its own accord. Upon examination, I found that, though the blood had been flowing freely, and had clotted in considerable quantity around and over the wound, not a drop could be seen oozing from it, after the cloths and clots were removed. The patient

remarked that she was suffering from the peculiar, unpleasant feeling in her back and loins, the premonitory indications with her of approaching menstruation, it being just about the time for them to occur. All this made her think the "blood was going to turn down." I had expressed the opinion to Dr. Wood, and to Dr. Lane, who was also present the day before, that this was a case of vicarious menstruation, that no arteries had been severed—natural or anomalous—the flow was not of that *per saltam* character; it was an oozing of blood; but torsion of what seemed to be the bleeding vessels stopped the flow. Immediately that idea was abandoned, but upon the return of the hemorrhage and again upon the subsequent cessation of it, with the premonitory signs of approaching menses, I returned to my original opinion, and in an hour afterwards the menses appeared; from that time no more blood escaped from the wound.

It may be well in closing this report to note the fact that a few years before the subject of this report had a tumor removed of a similar character to the one described, and there was no great loss of blood during the operation, and none afterwards. There was nothing like the hemorrhagic diathesis. She was not what we might call a plethoric individual—generally enjoyed good health, and was in good condition in every respect.

A Case of Intussusception. By W. H. Taylor, M. D., Washington, D. C.

S. R., æt. 11 years, was taken *October* 16*th*, 1867, between 6 and 7 A. M., with pain in the bowels, and diarrhœa. After three evacuations, all action of the bowels ceased. I was called to see the child on the morning of the 17th, a little over twenty-four hours after she was taken sick. I found her in a good deal of pain, and with considerable fever; the pulse was from 140 to 150 per minute; the skin hot and dry; there was pain and tenderness over the whole abdomen, but more especially in the right iliac region. I ordered small doses of a mixture of ol. ricini, ol. terebinth, and tinct. opii, to be given through the day; also an enema, and hot fomentations over the abdomen.

October 18*th*.—All the symptoms aggravated. Dr. Josiah Harding, of Maryland, and Dr. Joseph Borrows, of Washington, D. C., saw the case in consultation with me. Leeches (2 dozen)

were applied to the abdomen, followed by a blister, and Dover's powder and calomel in small doses every two hours.

October 19*th*,—Patient still suffering very much pain, but it is not so sharp as on the previous day. No operation from the bowels; pulse 130 to 140; vomiting of feculent matter during the day. Between 4 and 5 P. M. the abdominal pain was exceedingly severe. From 5 to 9 P. M. easier and slept some; at 9 P. M., small, hard evacuation from bowels.

October 20*th*.—Not suffering so much pain; bowels moved several times during the day; pulse 120 to 130.

October 21*st*.—Troublesome diarrhœa set in, which lasted several days; finally controlled by opium. The child was at this time in a very weak condition and much emaciated; abscess forming in right iliac region.

November 3*d*.—Abscess opened spontaneously, near crest of ilium, right side, and discharged freely very offensive pus. In two weeks time, another opening was formed on the opposite side of the abdomen. Pus in very large quantities was discharged from both sides of the abdomen for a month, when feculent matter began to pass freeely through both openings.

The opening of the left side closed after a few weeks. The original opening in the right iliac region continued to discharge matter from the bowels regularly for a year and a half—that is, up to April, 1869—when it closed, and has never re-opened to the present time—February, 1875.

This was evidently a case of intussusception, and I suppose the obstruction occurred about the junction of the small with the large intestine. The stoppage occurred suddenly during an attack of diarrhœa, and nothing passed from the bowels until the evening of the fourth day after the occurrence of the obstruction, and during the whole of that time there was the greatest distress and prostration. The bowel finally gave way, and the invaginated portion sloughed off, a portion of the contents of the bowel escaping into the peritoneal cavity, resulting in circumscribed peritonitis and the secretion of pus, which was finally discharged externally by perforation of the abdominal walls.

During the eighteen months that feculent matter was discharged daily by the opening near the crest of the ilium, there was regular evacuation of the bowels by the natural passage. The patient was in a very weak and debilitated condition for one year after the commencement of the attack; then she began to improve, and after the closing of the artificial anus the improve-

ment was very rapid, and she has enjoyed good health ever since, and is now a young lady of as good physical development as is ordinarily to be met with.

The treatment in this case, with the exception of the free injection of water into the rectum, was merely directed to the mitigation of the peritoneal inflammation, which set in quite early in the case. I am of the opinion that had surgical aid been invoked early in this case, that months of suffering could have been avoided, and the risk to the patient would have been much less.

Cases of Gunshot Wounds of Knee-Joint and Pelvis. JUNIUS L. POWELL, M. D., U. S. Army, Fort Leavenworth, Kansas.

CASE I.—*Gun-shot Injury of Knee-Joint—Recovery, with Anchylosis.*—G. L., First Lieutenant Company I, 5th Infantry, about 32 years of age, of good constitution and physical build. While escorting a wagon-train from Camp Supply, Indian Territory, to the headquarters of the Indian Territory Expedition, then near the Red River, Texas, on the 9th of September, his command was attacked by some 200 or 300 hostile Indians. At the first assault, L. was shot through the knee, the ball, a No. 50 rifle calibre, making its entrance at the inferior and anterior edge of the patella of the left leg, producing a slight fracture of that bone, and penetrating the inner condyle of the femur, was removed by a nick with a knife in the hands of a soldier from beneath the skin just at the inner border of the popliteal space. No medical officer was in attendance at the time.

I examined the ball when I reached him, four days afterwards, and found it very much indented, and containing small spiculæ of bone impacted in its body. The four days alluded to were consumed in an attempt on the part of the savages, by repeated attacks, to possess themselves of the wagons and massacre the entire command, which had been entrenched behind them. Of the amount of nervous shock sustained by the patient in the first instance, I know nothing. When I saw him he was quite despondent. Opiates were used *freely*, and the limb put in a simple bandage dressing with carbolic oil.

Founding my opinion of the case upon the general experience of surgeons with gun-shot wounds of the knee-joint, I could not but feel the gravest apprehensions, not only for the limb, but for the life of this officer, while I indulged the hope that it might, by the most undivided attention to his case, be possible to save both. I also considered the trying ordeal through which he

would have to pass in being conveyed in an ambulance over a rough country to the hospital at Camp Supply, nearly 100 miles distant. Would he be safer with the limb as it was, or with a stump? With these considerations in mind, I approached him cautiously, and informed him of the gravity of his situation, but to my great relief he was unwilling to consider for a moment the propriety of an operation. On the 14th, I sent him, with other wounded, to Camp Supply, where he was under the skillful treatment of Dr. Cleary, the post surgeon, until the 18th of November, when he was discharged from the hospital, and left for Fort Leavenworth.

Dr. Cleary informs me that in three weeks he was sitting up, and in five from the time of receiving his wound, he was able to use his crutches. Upon the occasion of an official visit to Leavenworth, November 30th, I had an opportunity of examining the wounded limb, and found it perfectly anchylosed and shortened, but still an invaluable member.

Case II.—*Gun-shot Injury of Knee-Joint—Recovery with Motion.*—F. S., Sergeant Company A, 6th Cavalry; age about 26; robust, healthy subject; was wounded at the same time and place by a rifle ball of the same calibre, which entered about the center of the inner border of the patella of the left leg, fracturing that bone, and passing under it, made its exit on a line with and about one-fourth of an inch anteriorly to the head of the fibula. In about three weeks the man began to use his limb. There is no anchylosis or stiffening of the joint, and the patella, though much distorted in form, and about double its original size, is perfectly movable. He will resume his duties in the field.

Case III.—*Gun-shot Wound of Abdomen through Pelvis—Recovery.*—Z. S. W., Sergeant Company I, 6th U. S. Cavalry, age about 28. While *en route* for Camp Supply, with a party of five others, as bearers of official despatches, the party was, on the morning of September 11th, attacked by 100 or more Indians, and forced to entrench themselves in a buffalo wallow, from which position they defended themselves with desperate determination until rescued. One of the party was killed, and all the others wounded, two receiving two wounds each. W. was struck by a No. 50 rifle ball in the gluteal region, on a line parallel with the articulation of the sacrum and coccyx, about two inches to the left of the median line, and passing beneath the great sciatic notch and through the pelvis, made its exit anteriorly and about one-fourth of an inch to the left of the symphysis pubis, grazing the bone as it passed out. The man was not confined to his bed a day, and at the end of three weeks from the time of receiving his wound, he again took the saddle.

Remarks.—It is agreed among surgeons that gun-shot wounds of the knee-joint are serious lesions, likely to result in loss of limb and life. If the rule established by statistics is to be considered as of universal application, the above cases are rare exceptions. In looking over the pages of Gross, I find that "of upwards of 40 cases of this kind in the French hospitals in the Crimea, in which an attempt was made to save the limb, all except one proved fatal. Of 9 cases which occurred in India, not one was saved. Guthrie never saw a gun-shot wound of the knee-joint, attended with severe injury of bones, recover without removal of the limb; the experience of Larrey was of the same nature; and Esmarch declares, as the result of his observations in the Schleswig-Holstein campaigns, that all lesions of this description demand immediate amputation of the thigh." The distinguished surgeon whom I have just quoted, also declares on his own authority that wounds, even when comparatively small, if they involve the epiphysis of the femur or tibia, imperatively demand amputation.

It should be remembered that most of these statistics are gathered from the hasty operations in the field of military surgery, where large bodies of troops have been engaged in bloody conflict, and where it could scarcely be expected that a single condition entirely favoring recovery from their injuries could come to the wounded. It is true that the surroundings in the two cases which have been reported were by no means favorable, but where such a condition does not exist, is it not an error on the part of the surgeon to be too swift in applying the knife? My observation teaches me that in the single item of antiphlogistics alone, their character and mode of application to the injured part, the most contrary results may be wrought.

The 3d case is cited as one of those remarkable instances of the invasion of vital parts by projectiles from fire-arms, with comparatively insignificant results; while the whole constitutes parts of a tragedy which, for heroic daring and desperate resistance to what appeared to be an inevitable fate, is without a parallel in the severe annals of border warfare.

Stramonium-ointment, locally applied, affords much relief in cases of arthritic effusions.—*N. Y. Med. Jour.*

Use of Carbolic Acid in Gonorrhœa. By Rives Tatum, M.D., Harrisonburg, Va.

In the treatment of this well known disease I have found nothing to answer like carbolic acid. My experience has been small, but so successful in the short while and upon the cases that have come under my observation, that I think it my duty to lay it before the profession, that others may throw more light upon such an important subject by their researches and experience.

C. Y., æt. 35, married, came to me with an attack of gonorrhœa, which he had contracted in some way, he did not know how; had given it to his wife. He had had it two or three weeks when I saw him; had been under the treatment of a physician who failed to cure him. I put him upon the usual remedies for gonorrhœa, such as copaiba, cubebs, buchu, &c., with injections of zinci sulphat and plumbi acetas. I continued this treatment for a week or more, but it did no good; and after running the gauntlet of the Materia Medica, with like success, I determined to use carbolic acid. I put him upon injections of carbolic acid, 1 part to 60 of water, and gradually increased the strength until I got it 1 to 40, using it 3 or 4 times a day, when an improvement was immediately noticed, and, in a week, he was perfectly cured.

His wife had been on the same treatment as I had had him on previous to using the carbolic acid, without avail, when I determined to use the carbolic acid injection on her, as it answered so well in her husband's case. After using it a day or two, an improvement was noticed, and in a few days she had entirely recovered.

I have used it in a good many other cases with like success.

I mentioned the two above cases because, after using the usual remedies for gonorrhœa for a long time without improvement, they yielded quickly to the carbolic treatment. The carbolic acid seemed not only to set up a healthy action of the mucous membrane of the urethra, but to destroy the *materies morbi* of the disease. I believe that in carbolic acid we have a remedy to which gonorrhœa more readily yields than to any other; certainly in my hands it has come up to my highest expectations.

Intemperance.—Moral treatment, aided by the force of the patient's will, is the best treatment for intemperance.

Correspondence.

Virginia Medical Notes—Prescription for Mammitis—For Dysmenorrhœa.

Mr. Editor,—The medical topography of Virginia may conveniently be divided into two districts, viz: the Piedmont and Tide-water. In the first typhoid, and in the second malarial fevers prevail. In both, scarlatina, phthisis pulmonalis, cancer and zymotic diseases are also common. Cotemporary with epizootia among horses, cows and other lower animals, the human species has suffered from spotted fever and diphtheria. The climate, productions and water of Virginia favor health, with the exception that during the extremes of weather in winter and summer sickness is increased. The habit of eating hot bread, and the use of tea and coffee, tends to increase stomachic affections, and may also affect the organization injuriously. Our men and women are not so robust as those in England and in the Northern and Western States—a fact which may be traceable to the too common habit of intermarriages in Virginia and the absence of foreign immigration. To what extent the uses and abuses of tobacco have operated to impair the vigor of our people, we have no reliable data to present, though beyond doubt sudden deaths from heart disease are more frequent among persons who indulge in the "weed," as in the Southern and New England States, than among those of other sections where tobacco is less habitually used. The same remark may be made of the injurious effects resulting from the well nigh universal use of alcoholic stimuli, which, moreover, necessitates an enormous expenditure of money. The history of nearly every village, town and city in the State will show an increase of inebriety since the late war. The American Medical Association and State Boards of Health have urged the importance of physicians discouraging such abuses. A large class of diseases may be traced, especially during the winter months, to insufficient clothing and shelter. Houses are constructed without reference to comfort, and fuel, both wood and coal, are usually provided long after the chill and cold have penetrated the body.

For several years past, the writer has noticed in the rural dis-

tricts of the State a large excess of female births—a fact to be accounted for by some authorities on the supposition that the women of the country, subsequent to the war, were possessed of greater vigor of constitution than the men. On this subject, Dr. H. B. Baker, Superintendent of Statistics for the State of Michigan, in his late report, reiterates an important conclusion which he arrived at in his previous observations on the birth rate, viz: "that what causes increase in this rate increases the proportion of female offspring." This is a singular fact, and tempts one to various speculations on the general causes of the difference in sex. Further, Carpenter, in *Principles of Human Physiology*, asserts that the sex of the offspring is influenced by the relative ages of the parents. The more advanced age of the male parent occasions a preponderance in the number of male infants, while others believe "human sex to be a matter of conception, decided at the time of coitus, and the stronger, healthier, riper party deciding the sex of the fœtus."

The circular issued by the late Dr. Stribling, of the Western Lunatic Asylum of Virginia, to physicians, and distributed throughout the State, making inquiry concerning the number and condition of the insane in Virginia who are not in the Asylums, cannot be too highly commended, because of the large number of unfortunates of this class still uncared for, and some of whom become victims of self-destruction.

It cannot be doubted that the practise of ignorant charlatans, cancer doctors and negro midwives, add largely to the death rate, while the people further suffer by the use of various drugs and quack medicines which are retailed at all the country stores.

In conclusion, brief reference may be made to the successful treatment of the inflamed mammæ by the use of lead water and laudanum, followed by solution of extract of belladonna, where constipation of the bowels exists, as in the case of pregnant females. The following prescription, which was furnished to me by Dr. Bedford Brown, of Alexandria, Va., will afford prompt relief:

℞. Podophylli ..... gr. ij
Ext. belladonnæ ..... gr. iij
Ext. hyosciami ..... gr. x
Ext. colocynth, comp ..... gr. xv

M. Make pills No. xii. S. One at bed time.

I take pleasure in adding a prescription by the same distin-

guished physician, with which I have never failed to relieve the pain and suffering of acute dysmenorrhœa:

℞. Ext. belladonnæ..... gr. xij
Ext. conii.....℥ij
Morphiæ sulphat.....gr. vj
Plumbi acetat.....gr. xij
Butyr. cocoæ.....℥vj

M. Make suppositories No. xii. S. One to be used at bed-time—the bowels to be evacuated the following morning by the use of Davidson's syringe.

Yours, &c.,

FRED. HORNER, JR., M. D.

Salem, Fauquier, Va.

Metastasis of Articular Rheumatism to the Spinal Meninges.

Mr. Editor,—A note of this case may be interesting, in that nothing like it seems to be described by Jaccoud, Hammond, &c., who, however, speak of rheumatism of the brain. The patient was a German woman, 50 odd years of age, under the care of Dr. A. W. Dodge, by whom I was called in consultation.

I was enabled to make the diagnosis above given, from the previous history of the painful, swollen joints of the extremities, which were suddenly relieved upon the occurrence of the attack of the spinal cord, with resulting locally severe, dull pains, and paralysis and œdema of the previously affected lower extremities. In this opinion Dr. Dodge concurred, and we agreed to administer large and increasing doses of iodide of potassium, to be taken three times daily, with the tonic effect of faradism to special groups of muscles, making the applications daily for six or eight weeks. The patient was finally able to leave her bed and go about the house, as she is now doing. One of the most interesting points in the case was the precise line of demarcation down the cord, thus describing the muscles governed thereby, as by absorption and gravitation the effused fluid gradually passed away.

Yours truly,

JOHN J. CALDWELL, M. D.

Baltimore, Md., Feb. 27th, 1875.

Chloroform as Antiseptic.—Aujendie, of Constantinople, in a pamphlet, 1850, stated this property of chloroform.

Analyses, Selections, &c.

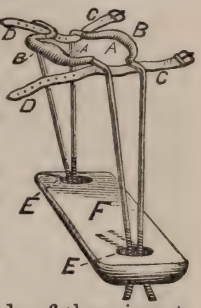
New Splint for Fractures of the Patella.—Dr. R. E. Beach, Patoka, Illinois, describes (*St. Louis Med. & Surg. Jour.*, Jan. 1875) a new apparatus for the treatment of fractures of the patella, for which he claims the following points of superiority over other splints:

1. Universal adaptability.
2. Ease of application and perfect adjustment—the nuts below the block regulating the tension of the wires, thus preventing the formation of sores from pressure, while the straps give perfect control of the superior fragment.
3. Cheapness and simplicity of construction.
4. Permits the free use of cold or medicated waters to the limb, as also free inspection of the parts.

Dr. Beach states that two years ago he was called to visit a gentleman with a transverse fracture of the patella. The fragments were separated to the extent of nearly four inches, the intervening space being completely filled by effused blood and serum in the synovial sac. (The same accident had occurred to him some twenty years ago, while exhibiting in Chicago—he was formerly a professional acrobat—the fracture happening in mid air, while in the act of turning a somersault.) The present fracture was also the result of muscular action, and was apparently a re-opening of the old fracture, which was treated by Professor Brainard, of Chicago, who, as near as Dr. Beach could ascertain, obtained close ligamentous union.

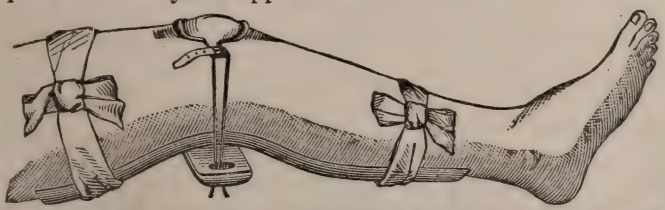
Dr. B. improvised and applied Hamilton's splint, but, on visiting him next day, found him complaining so much of the pain and discomfort which it occasioned that he was obliged to remove it. He procured O'Reilley's ring, but, after several ineffectual attempts, found it impossible to secure the superior fragment within the ring and retain it, owing to the combined resistance offered by the extensor muscles and the effused products within the joint. At this juncture the idea occurred to him that if he could construct a splint composed of *two half rings*, each one being made to grasp the fragment in its displaced position—use the lower as a fixed point, and, by the aid of small straps, connect the two segments and draw the superior fragment downward—that thus he might effect approximation. After some deliberation, he constructed the splint which he had the satisfaction to find fulfilled all indications. The splint is composed of two pieces of wire, each about 18 inches in length and $\frac{3}{16}$ of an inch in diameter.

The accompanying illustrations represent the splint, and its mode of application:



Wires in semi-circular form (*A*), the posterior part of each segment (*B*) being curved upward, and the sides a little depressed. A shoulder is formed (*C*) on each side of the segments for the reception of the two straps (*D*) which connect them, and projects far enough on each side to permit the wires to be bent downwards at right angles with the shoulder and descend perpendicularly to the slat or mortise (*E*) which is placed near each end of the block (*F*).

A thread being previously cut on the free ends of the wires to the height of three or four inches, the two sections are placed opposite each other, the ends passed through the mortise (*E*) and secured by nuts which are screwed on the projecting end of each wire. The wires should be bent a little backwards from each other at the point where they are confined in the slat, as it permits the two sections to be more readily separated at the top. The block (*F*) is of sufficient length to pass under the limb and project on each side about one and one-half inch. An inch from each end a small mortise (*E*) is made, large enough to admit the wires and allow the two sections to be separated at the top to the extent of five inches. Two small (*D*) straps, each provided with a buckle, serve to connect the sections, and are placed one on each side of the segments around the shoulders. The block being attached by a couple of screws to Day's posterior curved splint (*G*) at a point which would be directly beneath the knee-joint (it may, with equal facility, be attached to a straight splint), and the two segments, covered with chamois, render the splint complete and ready for application.



He placed the curved (Day's) splint beneath the limb, and s cured it in position by a strip of cloth tied around the limb near each end. The two wires he placed one above the other below the fragments, passed the ends through the mortise (*E*) in the block, adjusted the nuts, and screwed them up firmly enough against the under surface of the block to prevent the fragments

escaping from within the segments. He now found that he had complete control of the superior fragment, and, by the aid of straps, could pretty nearly approximate the fractured surfaces.

From this date, Dr. B. experienced little or no trouble with the case. The splint was removed as soon as he thought the union firm enough, using as a support an elastic knee-band. Upon examination, close ligamentous union was found; but, inadvertently permitting the patient to exercise the limb pretty freely a little too early, the ligament stretched a little—not, however, enough to interfere with locomotion.

In the treatment of transverse fractures of the patella, Dr. B. thinks it of practical importance not to exhibit too much haste in approximating the fragments, for the following reasons: By using slight traction, and shortening the straps a little once or twice daily, the muscles do not offer the same amount of resistance as when the fragments are forcibly drawn together. The effused blood and serum are also given time to be absorbed.

Nitrite of Amyl in Various Forms of Spasm, and its Value as an Aid to Diagnosis.—In a paper read before the Phila. College of Physicians, Feb. 3, 1875, Dr. S. Weir Mitchell said: Excepting its use in angina pectoris and asthma, this powerful agent had been little resorted to when, in April, 1872 (*Phil. Med. Times*), I reported cases of its use to arrest epileptic attacks. During the same year I advised Dr. Jenks to test its value in puerperal eclampsia, which he accordingly did, reporting his success in the same journal in 1873. During that year (*Arch. Sci. Prac. Med.*, p. 311), Dr. Wharton Sinkler related a remarkable case in which nitrite of amyl had been freely used with admirable results. Since then, in the *Med. Times* and in the *Reporter*, I have more briefly alluded to the value of this agent as a means of diagnosis.

I make this statement, first, because it shows that what I shall state is founded on no brief or recent experience; and second, because it seems to be unknown in England that it had been long used as an antispasmodic agent in America.

For more than a year I had been aware that nitrite of amyl would be a proper means to use in epilepsy. It was clear to me that the nitrite caused, with rapidity, fulness of the vessels of the whole head, and that near to the outset of an attack of epilepsy there is a condition of vasal spasm. I hoped that I would be able, by the use of the nitrite, to counteract this state of vascular contraction, and so to break the chain of morbid phenomena, and thus end the attack before its more disastrous consequences should follow. This reasonable expectation was not

disappointed. I was, of course, well aware that in most cases of epilepsy there would be no time to secure the inhalation of enough of nitrite of amyl to produce an effect, but I was also aware that in at least two classes of epileptics the opportunity for its use would be given. There are rare examples of epilepsy in which the warning of the coming on of an attack so far precedes the spasm and loss of consciousness as to enable the patient to inhale the nitrite. In other cases, the patient has a succession of fits within a limited space of time, and being then, of necessity, in bed, is so placed that a watchful nurse may find time to use the nitrite. I waited long for my first chance, but in March, 1872, the opportunity came. (*Phil. Med. Times*, April, 1872.)

J. C., æt. 20, epilepsy due to venereal excesses—the fits being always preceded, except on two occasions, by spasms of the left hand and arm. As a last resort, three or four drops were put into a vial, and he was directed to inhale it by putting the open vial up one nostril, while with one finger he closed the other, and then made a few full inspirations.

The first attempt failed, because, as he said, the spasm of the left limb made him nervous. On the second occasion, he began to breathe it the instant the fingers twitched, having pulled the cork of the vial with his teeth. In a few moments he felt his face flush, the carotids beat violently, his head felt full, and, the spasm ceasing, the attack at once, and for the first time in his experience, was cut short. Four days later, he thus cut short another attack; and the experiment has since succeeded in 11 fits, and failed, from too late use of the nitrite, in two. Moreover, the attacks have lessened in frequency, and now come on only once in ten or twenty days. Not only is there no evil effect from the drug, but his memory has improved; is again taking bromide of lithium.

During the last 2½ years, he has had only seven fits, the last being nine months ago. I said seven fits, but, in reality, only one fit, all of the others having been cut short by the nitrite.

Since this case demonstrated for me the remarkable power of this agent to check spasm, I have given it for that purpose a number of times, its value being limited by the rarity of cases in which there is time to secure its full inhalation. In some of my examples the chance of using it has been occasional only, not all of the attacks affording the time needed to secure its value.****

In the following case, there was a gastric aura which preceded the fit by an interval so long as to enable the sufferer to inhale the nitrite:

Miss E., æt. 26. Has had epilepsy seven years. Her whole

history it is needless to relate. About one minute before the fit comes on, Miss E. has a sense of what she calls "goneness" at the epigastrium. This sensation passes into nausea, and apparently the fit interferes with the consequent vomiting, which very rarely follows.

This form of aura is certainly rare. The nitrite of amyl instantly arrests both the nausea and the subsequent fit; but the sense of fulness in the head so alarms Miss E., who is a highly nervous and emotional person, that she is very averse to using it.

The following case, which is one of the most remarkable known to me, was reported by my former clinical assistant, Dr. Wharton Sinkler, in the *New York Archives of Medicine* [?]:

James M., æt. 24, single. November, 1871, fell 95 feet, and had fractured ribs, dislocated ankle, and fracture of the lower dorsal spine. Unconscious one week. Subsequent palsy of legs, and insensibility. He was five months in this state, and had all of this time incessant headache; then he began to have convulsions, and lost hearing and speech. When he entered the Infirmary for Nervous Diseases, he walked on crutches, but the left leg was palsied totally, and much contracted. The tongue and velum were paralyzed, and he was deaf and speechless.

On the 14th day after entering, he had a fit, and they became almost incessant. Blood was taken from his neck, and almost at once hearing came back, but the fits, which were violent, continued. Nitrite of amyl was now used. It checked a long fit instantly, and after this it was given whenever a fit took place and it could be used in time. In every instance it aborted the fit.

I have never seen nitrite of amyl fail where there was time to use it. Last week I suddenly checked with it a fit coming on in my office, and a few months ago had the chance of exhibiting to those present at my clinic its capacity to stop for hours the convulsions of tubercular meningitis in a child.

From what I have seen of this agent, it does not seem to possess, in most cases, any capacity to lessen the probability of a return of the fit; but of its power to arrest the actual convulsion, there can be no doubt.

I have spoken of the use of the nitrite in the convulsions of tubercular meningitis. I have not yet used it in forms of spasms from peripheral irritation in children, but it would be, I should think, a safe and a ready agent. Neither has it been as yet employed in the horrible convulsions of uræmia.

Dr. M. details at length a case, remarkable for the fact that the patient is liable to at least three forms of attack; and that the nitrite, while it checks one of these, does not affect the second form, and as to the third, far from relieving, only makes it

worse. In the spasmodic attack the right thumb is first turned inwards; then the fingers, and lastly the wrist, are forcibly flexed. Rarely the neck is twisted, and more rarely the right face. This form of fit is cut short by the nitrite. As the face flushes, the attack passes off. The spells of pure giddiness have been frequent of late. They come on suddenly, and there are none of the strange mental conditions which attend the other spells. Now, in these vertiginous fits, the nitrite, if used early, only hastens the culmination of the trouble, and, he believes, greatly intensifies it.****

The influence of amyl over cases of hysterical angina is as well marked as in those of men, or in non-hysterical attacks of this disorder. I have twice employed it in forms of disease which are akin to angina, are not infrequent, but lack a distinct name. Here is one which may pass as an illustration:

A middle-aged lady, after many and grave trials during the late war, began to suffer from occasional attacks, which came at any time in the day, held no relation to conditions of the stomach or uterus, but were at last most frequent and distressing. A sense of fulness at the epigastrium announced the attack, and from the stomach a sort of aura, accompanied with a feeling of panic and terror, passed up into the head, with intense pain in the right neck and face, the infra- and supra-orbital region, and at last a few moments of deadly pallor ended the attack, which occasionally wound up with nausea, and rarely with emesis. There was no irregularity of the heart, no pain in the arm, only a slight quickening and enfeeblement of pulse towards the close of the attacks, which usually lasted from one to five hours, and when I saw her were of daily occurrence. After a trial of many means, I at last used the nitrite of amyl. The effect was singularly happy, and it was very rare that it failed to break up and dispel the trouble.

I come now to speak, and with rather more hesitation, of the use of this agent as an aid to the diagnosis of certain forms of cerebral disorders.

Those who see much of neural diseases meet very often with cases of head troubles, in which there are attacks of vertigo, or disturbed equilibrium, or mere sense of fulness with or without mental disorder. Sometimes they are either epileptic and distinctly so, or else they are the far-away beginnings of that malady. Sometimes a therapeutic diagnosis is possible, and the mere fact of the bromides controlling them may, when taken with the symptoms, clearly settle their nature. But very often our suspicions are in favor of their being purely vascular disturbances of congestive type, and then I think the nitrite of amyl may

prove serviceable in settling the question; since in such cases the inhalation will sometimes recreate briefly the train of symptoms, so that they are at once recognized by the patient. This, when it occurs, is fairly conclusive as to the attacks having been truly congestive in character. The negative has also its value. Personally, I have obtained useful help from this means, but I look upon the whole matter as one which it is well to present to the profession as worthy of study, without at present claiming for it any great utility.

I give cases to illustrate the use of the nitrite in diagnosis:

E. L., very nervous and irritable, æt. 29. Has spells, two or three times a week, in which he is said to lose consciousness, without any co-existent spasm. On other occasions the trouble does not go so far. On inhaling nitrite of amyl, he said at once, "That is the kind of feeling I have in my attacks." I came soon, thus aided, to understand that his fits were coincident with relaxation of the arterioles. He was rapidly cured by full doses of digitalis, with general tonics and cold shower-bath.

Robert H., æt. 38; a master of an oyster-boat; had a slight sunstroke in August, 1873. Ever since, he has a great deal of vertex headache, with now and then severe attacks of general headache. I was inclined to believe that the vertex pain was due to subacute meningitis. It was suddenly increased by the drug to such a degree for a few minutes as made me regret my experiment.

In some cases the nitrite has failed to help me; in others it has returned a useful negative; in others a still more valuable affirmative.

After much and long use of it, I have altogether lost the dread of the remedy with which I began. I would suggest that in syncope and in hysterical convulsions it might well repay a trial, and that possibly in the cerebral symptoms arising from shock it may also prove of value, and should be essayed in the cold stage of ague.

Eversion of the Bladder in an Adult.—Dr. Geo. Thompson relates (*Lancet*, January 9, 1875) the following: On the 7th of August, 1873, I was hastily summoned to Mrs. R., during the temporary absence of her regular medical attendant, Dr. Yates. I found the patient, somewhat over forty years of age, on her hands and knees in bed, writhing with pain and straining violently. While passing water, about half an hour before my arrival, she felt something come down, and was immediately seized with violent straining pain, and had been ever since in the condition in which I found her. On further inquiry, it transpired

that she had been suffering for nearly 24 hours with acute cystitis, of which I found abundant evidence in the recently evacuated urine.

On digital examination, I found, instead of the anticipated uterine displacement, a small, hard, nodulated tumor, about the size of half a walnut-shell, and covered over with some gritty substance protruding from the orifice of the urethra. Procuring a candle, I at once made a closer inspection of the tumor, which I found to be rugous on the surface, of a deep red color, and encrusted with a white, calcareous-looking deposit, which was afterwards ascertained to be phosphatic.

As the condition of the woman prevented me from easily obtaining further information, I sent at once for chloroform and the necessary instruments, imagining that I had to deal with some outgrowth from the urethra or bladder which would require removal. It then passed through my mind that it was within the bounds of possibility that this was a case of eversion of the bladder. Dr. Yates having made his appearance at this juncture, I communicated to him my suspicions, and, with his assistance, put our patient under the influence of chloroform. I then proceeded to pass my finger along the urethra by the side of the pedicle of the tumor, which I did without much difficulty, the urethra proving to be unusually large and dilatable. I found that the pedicle arose from the posterior wall of the bladder, in a manner that strongly confirmed my impression that the case was one of eversion, and Dr. Yates having arrived at the same conclusion, we resolved to reduce the tumor. This I did after carefully removing the phosphatic incrustations, and followed it into the bladder with my finger, with which I carefully explored the surface from which I had just previously found the pedicle to arise. I found no trace of any tumor or pedicle of any kind whatever on any part of the interior of the bladder.

A full opiate was then administered, and the patient directed to remain in bed. The cystitis rapidly disappeared, and she had no threatening of recurrence of the accident, and she became perfectly well, and has so remained till this day.

This case is, so far as I have been able to ascertain, perfectly unique, in so far as adults are concerned, although it is known as a rare accident in young children. The theory I have formed is that phosphatic deposit having taken place on a portion of the inner surface of the bladder, acute cystitis was set up as a consequence; that the natural effort to extrude this foreign and irritating body, during the excessive straining which accompanies micturition in acute cystitis, was favored by the existence of an unusually large and dilatable urethra, and produced the remark-

able accident detailed above.—*Monthly Abstract Med. Sci.*, March, 1875.

Nelaton's Method in Chloroform-Narcosis.—In the *Amer. Practitioner*, February, 1875, Dr. M. H. Jordan reports the case of a girl, æt. 18, to whom chloroform was administered preparatory to the extraction of a tooth. After four or five inhalations, some spasmodic movements were observed, the pulse became small and feeble, and, together with the respiration, soon ceased to be perceptible. The entire muscular system was completely relaxed, and the lips, face and hands grew livid. The patient's body was immediately inverted, the jaws were pried open, and efforts at artificial respiration were made by alternately pressing in the thorax and abdomen. After about five minutes had elapsed, there was a feeble attempt at respiration, followed after a long interval by others, and a gradual return of the pulse, until it was deemed safe to place her on a bed. As soon as she was put in the horizontal position, however, the breathing again ceased, and the pulse disappeared. She was again instantly placed with her head downwards, and artificial respiration was renewed. After a prolonged interval, the breathing was re-established, and the pulse again returned. There was no further trouble, except an inclination to stupor, which was counteracted by stimulating applications to the spine, and hot foot-baths.—*Phil. Med. Times*, March 6, 1875.

Chloroform Death—Resuscitation by Nelaton's Method.—Dr. Freuzal reports (*Progrès Médical*, January 30) a case in which a child, apparently dead from the administration of chloroform, was recalled to life by inversion and suspension by the feet, and forced movements of the chest. The case forms an interesting pendant to those related at length in our columns recently by Dr. J. Marion Sims and Sir J. Rose Cormack. The lips and face were discolored, and there was neither heart-action, pulsation or respiration. The effect of inversion was very rapid, and markedly effective.—*The Clinic*, March 6, 1875.

Ergotin Hypodermically in Uterine Fibroids.—This treatment is most likely to be attended by favorable results:

1. When the tumor is richly provided with muscular tissue and possesses the consistence and feel of a tense, elastic cyst.
2. When the tumor is submucous.
3. When the walls of the uterus are sound, capable of vigorous contraction, not too much attenuated by dilatation or stiffened by exudation in their substance, and when there is no para- or peri-metritis present.

4. As soon as the chronic metritis and parametritis, which frequently accompany fibroid tumors, have been removed by proper preparatory treatment, when the previously mentioned conditions again come into force.

5. When the tumor is unprovided with a capsule and merges directly without a boundary into the peculiar tissue of the uterus, which anatomical relation of uterine fibroids may be considered most favorable to their complete cure by absorption.—Hildebrandt, *Amer. Jour. Obstet.—Clinic*, Feb. 27, 1875.

Resection for Compound Dislocation at Ankle Joint.—In *R. & L. Med. Jour.*, March, 1875, Dr. J. W. Thompson, of N. Y., says that Dr. Frank Hamilton stated in his clinic that he was now satisfied after a long experience that, in compound dislocations at the ankle-joint, resection or amputation should be resorted to. He remarked that he had treated two or three cases successfully with the plaster-of-Paris dressing; but his experience was very decided that recoveries without resection or amputation were exceptional; therefore, as a rule, one or two inches of the tibia should be exsected. He exhibited a patient with this dislocation which had been treated with a plaster-of-Paris dressing. Gangrene was commencing, and the patient's condition very unfavorable. Dr. H. removed about one and a half inches of the tibia. Two weeks after the operation the patient was much improved, and the indications are the limb will be saved.

Experience of Confederate surgeons in our own late war, as I am informed, was in favor of Dr. Hamilton's views as to the proper treatment of this injury. Excision of bones as a substitute for amputation in some cases has gained favor with New York surgeons during the past few years; they were, however, rather slow to give the conservative operation of excision of bones its merited place in practice.

Explosive Medicines.—Doctors are warned (*Revue de Therap.*, 1873) against combining certain agents, which in case of development of acid, or if exposed to moderately high temperature, are liable to *go off*. Among these dangerous formulæ may be cited a prescription for pills not unfrequently employed in England, composed of nitrate of silver, extract of nux vomica, muriate of morphia, conserve of roses and extract of gentian, which, when affected by the development of heat, will speedily explode. In like manner, pills made of nitrate of silver and creosote, or carbolic acid, will very soon generate heat sufficient to induce spontaneous combustion. Still more surprising to the occupants of the sick-chamber is the energetic explosion (suggestive of nitro-glycerine) arising from the pills or mixtures of which oxymuriate of potash forms an ingredient.—*Drug. Price Current*

Proceedings of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

The Dome Trocar*—Its Application to Ovariotomy, Aspiration and Transfusion.

By Simon Fitch, M. D., (Edinburg) New York City.

February 9th, 1875.—The trocar, formerly little valued and seldom used, has recently attained a high rank in the surgeon's armature, and is now, even in its yet imperfect form, constantly employed in the detection, discrimination, and treatment of diseases which, without its aid, were occult or obscure and intractable.

Many of these diseases, such as hydrothorax and empyema, hydro-pericardium, hydatids and abscess of the liver, tympanites, strangulated hernia, retention of urine, with impermeable urethra, hydrocephalus, spina bifida, and various hurtful collections of fluids, cystic or free, are situated in or adjacent to either the lungs or heart, or brain or spinal cord, or abdominal viscera, or pelvic organs, or the great joints; and when we consider how these sensitive and vital structures demand careful protection against all mechanical injury, beyond what is essential to the discovery and extirpation of their ailments, it will be evident that the instrument used in or upon such parts, whether for exploration or treatment, should be—

1st. *Easy of insertion*, so that it may not bruise, lacerate or stretch the walls of the cavity to be entered, nor disturb the connections or relationships of neighboring parts.

2d. *Harmless when inserted*, so that it shall not injuriously abrade, nor scratch, nor puncture the interior of the cavity or adjacent structures.

3. *Competent to give the freest exit*, consistent with its size, to the fluids which are to be discharged.

4th. *Apt to leave*, upon withdrawal, *such a wound as will most readily heal.* The old trocar, with its canula fitting more or less loosely behind the triangular head, is a clumsy and dangerous instrument. The aperture made by the point of the instrument is forcibly dilated by the bulging occiput of the trocar's head. Then the split end of the canula does not pass in smoothly, but

*We are indebted to Dr. Geo. W. Wells, of New York, for this verbatim transcript of Dr. Fitch's valuable contribution. We regret that the MS. was received too late for the appearance of the paper in the more appropriate department of this issue. We regret also that the appropriate illustrative cuts have not been received up to the time of going to press, but these we hope to present in a future issue.—Ed.

as it is expanded in being pushed forward over the head of the stylet, is liable to get entangled in the tissues at the edges of the triangular aperture, and so fail to enter perfectly; or, if forced in past the obstruction, the orifice is still further stretched and the edges irritated, or, perhaps, lacerated, and, upon withdrawal of the instrument, there is left a jagged, punctured wound, indisposed to heal by the first intention.

In 1850, Sir James Y. Simpson had the head of the stylet reduced to the same size as the shaft, so that it should stretch the orifice less, and as the canula could then be advanced without spreading, he omitted the split in the end; and Sir James at the same time announced his employment of a long, slender trocar, with an exhausting syringe attached as a means of diagnosis in various internal enlargements, especially in pelvic tumors, and so initiated the idea which Dieulafoy subsequently elaborated into his admirable aspirator.

The idea of making the canula itself pointed, so as to penetrate independently of the stylet, was first suggested in 1853 by Fergusson, of London, who contrived a pen-like tubular needle for injection of perchloride of iron in the treatment of nævi and aneurisms. In 1858, Dr. Alexander Wood, of Edinburg, adapted this instrument to the subcutaneous injection of morphia, and a modification of the same instrument is now in universal use. Spencer Wells shortly afterwards enlarged this little tubular trocar, for ovarian tapping, and made the edges of the pointed end sharp and cutting for one-half the circumference of the tube, whereby a semilunar cut is made (if sharpened all round it would cut out a circular piece and leave a round hole), and he added a sliding outer canula which, upon puncture being effected by the cutting point of the inner tube, is pushed forward as a guard against further action of that point. This instrument, superior in many respects to the old trocar and canula, especially in respect to the wound made by it, being incised rather than punctured, has still, in common with it, this grave fault, that the protecting tube is on the outside, and if made thin, so as to pass more easily into the aperture made by the point of the inner tube, the open end becomes a cutting edge, dangerous to the interior of the cavity, and to the contained or adjacent viscera, as the bladder, when the contents are discharged by puncture, or the heart in tapping of the pericardium, or the lung in paracentesis thoracis, or the intestine in tapping for ascites. The outer tube is sometimes obtusely pointed, so that it may enter more easily, but this makes it more dangerous to the interior.

But if the terminal edge of the outer tube be blunted, or made thicker, so as to better protect the interior, then it necessarily

presents a resisting margin or shoulder outside and behind the point of the inner tube, liable to catch and carry before it the sac or the immediate investment of the cavity, and so fail to properly enter.

Now, this accident may occasion considerable inconvenience, or even be productive of great harm, in cases of merely simple tapping, as, for instance, in hydrocele, where, if the tunica vaginalis is not very tense, it is oftentimes extremely difficult to get the outer canula pushed in over the puncturing end; and in empyema with a thick and tough pleura, so much force is sometimes required to urge the entrance of the outer tube as to really endanger a separation of the membrane from the ribs. And in tapping for the temporary relief of ovarian dropsy, if the outer tube do not follow the trocar quite into the cyst, or if, in entering, it catches and tears or splits up a fragile cyst, more or less of the cystic fluid will escape into the abdominal cavity, and is one cause of the fatality which sometimes follows this simple operation. But should injection be attempted with an imperfect introduction of the protecting tube, whether that tube be the canula of the old trocar or the outer tube of Wells' trocar, the result may be most disastrous. I have seen intense peritonitis occasioned by tincture of iodine thrown upon the peritoneum in such an attempt to inject an ovarian cyst. And Syme, in his *Principles of Surgery*, noticing a like faulty injection for cure of hydrocele, remarks, "if the liquid is allowed to remain in the cellular substance it gives rise to violent inflammation, and soon terminates in sloughing of the scrotum."

I encountered on many occasions difficulties similar to the above, and, in common with others, tried to obviate the uncertainty of entrance of the outer canula by cutting down to the peritoneum or pleura or tunica vaginalis, or whatever might be the immediate investment of the fluid to be evacuated, or the cavity to be entered, until it occurred to me to reverse the relation of the tubes to each other; and while in Edinburgh in 1871, I had an instrument made by Gardner upon the following plan:

The outer tube, smooth and of uniform size, has the distal end pointed and cutting, like a lancet, so that it penetrates easily and to any depth without the necessity for previous incisions of superimposed tissues, and the protecting tube being *inside*, may then be advanced into the interior of the cavity with absolute certainty of entrance, and without the possibility of even touching the margin of the aperture or any of the tissues through which the outer tube has passed. The cutting edges of the puncturing tube should rise from the point, not suddenly, nor in a curvilinear form, but gradually, and in a perfectly straight line,

making an angle of less than 45°, with the pointed side of the tube, so that it shall enter by a clean incision, and without stretching the aperture. Instruments similar to the above were made for me by Krohne and Sesemann, in May of that same year, and were exhibited at the next meeting of the British Medical Association in London, August, 1873. The largest size is noticed in Spencer Wells' recent work on *Diseases of the Ovaries*, p. 336. But the smaller-sized instruments seem to have been overlooked, for Mr. Alfred Goodrich, in a letter to the *British Medical Journal*, August 8th, 1874, says: "in emptying a cavity with the aspirator the operator is often alarmed by finding the instrument filled with blood, arising from the walls of the collapsing cavity being forcibly sucked against the sharp point of the needle," and he proposes, as if it were his own idea, that the trocar consist of two tubes—the outer one pointed, the inner one not so.

But in the *Journal* for August 22d, Mr. George Brown, of the Northeastern Hospital for Children, referring to Mr. Goodrich's suggestion of a trocar guarded by an inner tube, remarks: "The idea is not original. We have had one in constant use for more than twelve months, which was supplied by Messrs. Krohne & Sesemann," who were the makers of my instrument in 1871, and which, in the catalogue of the Museum at the forty-first annual meeting of the British Medical Association is designated "*Wells' Trocar, improved by Fitch.*"

Yet, this instrument is *not perfect*, for although the certain entrance of the protecting tube is securely provided for against possibility of failure, yet the open end of this same tube may itself be a source of danger, especially in the aspirator-trocar, where it must be made very thin to avoid bulk. In the August Nos. of the *Journal*, just quoted, a correspondence appears in reference to a successful paracentesis for hydrops pericardii, where Mr. Singleton Smith, upon whose patient the operation was performed, admits the risk which accrues from not only the point of a trocar allowed to remain within the cavity of the pericardium as the fluid drains off, but also from the sharp edge of a canula rubbing against the pericardium or coming in contact with the beating heart. And about the same date, the *Lancet*, under the head of "Medical Facts," observes that "in tapping of the chest, when the fluid has been evacuated by the exhausting apparatus, the lung in expanding may strike against the sharp and hard canula. To prevent this, M. Behier, of Paris, uses a canula of soft metal to be introduced into the ordinary tube, which, when the pleura is emptied, bends down against the parietes of the chest, and the lung does not suffer."

Now, a tube of soft metal cannot be safely drawn very thin, and were it made large enough for the bore to be permeable to fluids, it would be too bulky to enter a small canula. Again, were it used with a tubular trocar, it would, upon bending down, leave the *point* of the trocar exposed. Or, if used in conjunction with the old trocar and canula, the stylet would have to be removed before the soft tube could be inserted, and then it would interfere with the adjustment of the aspirator, unless pushed in beyond the attachment of the aspirator, when, if it became bent down against the parietes of the chest, it would be in danger of slipping into the cavity upon withdrawal of the canula. But an insuperable objection to this contrivance is, that the impingement of the lung against this soft metal tube, upon any sudden movement of the patient, or from the coughing which generally occurs during the evacuation of the chest, and the consequent expansion of the lung, would bend down the tube prematurely, and stop the flow of the fluid.

I have now to announce a *most important* modification of the double tubular trocar, which covers the danger of the open canula, and by which the instrument, while performing its ordinary functions safely and efficiently, shall be a trustworthy exploring probe, or sound, and by which, I believe, many lives will be saved. I have had the distal orifice of the inner canula closed over by a rounded or dome-shaped roof, so that when it is projected beyond the cutting point of the outer canula, the two tubes fit closely together, and the end of the combined instrument feels perfectly smooth, like the end of a sound or catheter, and may be freely moved within the cavity penetrated, as the ovarian cyst, the abdomen, the thorax, the bladder, or even the pericardium, without danger of wounding any viscus or organ, puncturing any vessel, or even scratching or abrading the lining of the cavity, or of any parts contained therein. The base of this dome being of the same external circumference as the inner tube, and fitting the outer tube accurately, when the point of the instrument enters the cavity there can be no escape of fluid till the dome is advanced, occluding the cutting point of the outer tube; then there is disclosed a fenestra or oval aperture on the *under side* of the inner tube, cut out of the lower wall and one-third of each side wall, of the full size of the bore of the tube, and by which the fluid may be freely evacuated. The segment in the tube forming the distal end of the fenestra is sloped off towards the dome, so that a flake of plasma or accidental piece of tissue resting upon it will easily slip off, upon the instrument being moved. But the lip at the proximal boundary of the segment projects in a curve over nearly a third of the fenestra, so

that the fenestra may not be obstructed by any substance in the cavity. The trocar thus constructed is harmless to the parts requiring protection, and the fenestra so guarded, and being, moreover, on the under side, cannot be stopped by the wall of the cavity coming into contact with it, as often happens to the open end of the old canula, nor by the falling upon it of the viscera, or any layer of false membrane; and if there be an aggregation of cysts or a multilocular sac, the instrument may be employed as a probe or sound or long artificial finger with which to feel for a proper place, where it may be held till the cutting point is advanced to make an aperture for its introduction. Thus, in ovariotomy it will be found extremely convenient, the left hand supporting the tumor and the right holding the instrument, which can be instantly changed, by an easy movement of the same hand, from a trocar to a sound, and *vice versa*, to define and puncture cyst after cyst, until the bulk of the whole is sufficiently reduced to admit of withdrawal through the abdominal incision, and with only one *outer* aperture in the sac first punctured, and this always occupied by the instrument. The dome trocar may be here used (where the end of the open tube could not be safely) to stir up and liquify loculose contents, and to break down such obstructions to the flow as imperfect septa and membranous intersections, while it still plugs the original aperture, preventing the escape of cystic fluid into the cavity of the abdomen; and it may thus oftentimes obviate the necessity of enlarging the aperture in the cyst for the introduction of the hand. In operating against hydatids, as, for example, of the liver, the dome trocar of small size may be used to dissever and disintegrate the hydatids while the aspirator is extracting them through the same instrument. Or it may be employed to search for and drain off the last drops of urine during aspirato-puncture of the bladder, which we dare not do with the end of the open canula.

In the ovarian trocar, and in the trocar for paracentesis abdominis, the inner tube is advanced or retracted and fixed in either position by means of a thumb-rest. A curved metallic tube fitting upon the proximal end of the outer canula, serves as a handle, and directs the current downwards, while one end of an India rubber tube three feet long, may be drawn over the lower orifice of this curved, hollow handle, to conduct the liquid into a receiving vessel. The middle of this tube is expanded into a bulb, by which the flow through the tube may be promoted or hastened, and the cavity more rapidly and perfectly exhausted, or washed out or injected. The handle is fastened by a screw on the right side, and can be removed, and the tubes separated for cleansing.

For the original idea of the thumb-rest and the handle, I am happy to thank Dr. Thomas Keith. The wooden ring, with Wells' grapples, may be slipped upon the instrument, but it is difficult to make them catch the sac until it is partly emptied. Or light, long, clamp forceps may be used, with numerous teeth in the broad distal ends, by which the sac may be easily seized immediately upon or even before puncturing, and, being held in the hand with the trocar, accommodate themselves readily to the varying distances to which the trocar enters. Or they may be attached to the instrument by a sliding ring narrower than Wells', or by a shifting ratchet, and I think will be less liable to tear out than Wells' hooks.

The smaller sizes have no handles, for, owing to their fineness, they will enter with very little force, and it is generally desirable to attach the aspirator or syringe either before or else immediately after puncturing.

The attachment is instantly effected by pushing the conical end of the aspirator nozzle into the proximal end of the inner tube and fixing it by one turn of a ring nut, like a hose coupling, which makes the joint perfectly air-tight, without moving either the trocar or the aspirator; when an India rubber tube is used between the nozzle and the aspirator, a bit of *glass tubing* with a flange on each end, is fitted into it near its attachment to the nozzle and similarly into the India rubber tube of each of the larger sized trocars, so that the current may be observed or its absence noticed. A hole or window may be made in the middle of the outer canula with a similar hole in the inner tube, so situated that if the inner tube be advanced, say half an inch for the smaller and an inch for the larger sizes beyond its ordinary full projection, then the two openings shall correspond; a silver probe or whalebone stylet may be introduced from these corresponding apertures to or through either end of the trocar without removing it from the cavity, and without detaching the connection with the syringe or aspirator.

To favor this clearing of the distal portion of the trocar, the dome is made solid, with the base slanting, in such way as to throw out of the fenestra any probe or wire or stylet inserted from below, and with it any obstruction of this orifice.

There is a very important operation which I think may be performed by the aid of the dome trocar, with great ease and safety. I refer to *transfusion*. A trocar of suitable size having been attached to each end of an India rubber tube, a foot long, with the middle expanded into a bulb, one of the trocars is inserted into the vein which is to furnish the blood; when the apparatus is filled, the other trocar is introduced into the receiving

vein, and the operation is completed. The receiving vein should be exposed by a short incision; but the supplying vein will generally be sufficiently prominent to be entered without previous dissection. In the ordinary mode, after cutting down to the vein, an incision or puncture is made into it preparatory to the introduction of the tube. Now, it is difficult to get the end of the tube commonly used into the puncture, if only of the exact size to admit it. If the puncture be larger, a ligature upon the vein around the tube is afterward almost indispensable, to prevent leakage and waste on one hand, and admission of air on the other. But with the dome trocar no previous opening of the vein is required; the puncture being made with the lancet-like point of the instrument itself, the tubes pass in instantly and with absolute certainty, and so accurately fill the incised puncture that there can be neither escape of blood from the vein nor entrance of air into the vein by the outside of the tube; and as, after the apparatus is filled, the tubes are closed by the domes up to their very ends, neither can there be any entrance of air through the tubes. As soon as the lancet-end of the outer tube is inserted, the dome is projected from the interior, and the tubes thus guarded may be safely pushed as far as reqnired downward into the furnishing vein, and upward into the receiving vein, and nó ligature will be needed. Thus time, so valuable in this operation, is saved; disturbance of the vein is avoided, and injury to the interior of the vein need not be feared. The anastomosis between the veins being thus established, the flow from the supplying to the receiving vein will probably go on spontaneously, or may be favored by gentle manipulation of the elastic bulb. The tubes are closed and opened at their distal ends by retraction and projection of the domes; no other valve or stop-cock is needed in the apparatus. If the mediate method is preferred, a common glass or metal cylinder syringe, with the piston removed and the nozzle inserted into a flexible tube, armed with the trocar closed, will be a suitable reservoir into which the blood may be caught as in ordinary venesection; or the blood may be defibrinated by whipping, and strained into the syringe; then, by inserting the trocar, we need not replace the piston, for sufficient and more steady propulsion may be obtained by merely raising the syringe. It would be wrong to force into the vein any clot which might obstruct the instrument.

Mr. Wagstaffe uses a nozzle with the hole half an inch from the extreme point, which he introduces through a puncture and ties into the vein; this nozzle may be withdrawn sufficiently to expose the hole for the removal of obstructions, while the closed end still remains within the vein. This expedient might be ap-

plied to this instrument by merely placing the fenestra farther from the distal end. But so little time is required for the operation with the dome trocar, that a clot, which is the only obstruction to be anticipated, need never occur. Should the plan, however, be adopted, the end of the canula beyond the fenestra should be solid to prevent clotting from lodgment of blood there; and the trocar, so modified, should be reserved for this one operation, as the long projection of the end beyond the fenestra would be a disadvantage in all other cases for which the instrument is required.

The hole in one side of the nozzle, as used by Mr. Wagstaffe, would be in danger of occlusion from the contiguous wall of the vein; in the dome trocar this is provided against by having the proximal end of the fenestra protected by a curved projection of the tube-wall, open at the sides, as previously described.

I believe the dome, mounted upon a long steel spring, instead of an inner tube, may be used within a catheter-shaped puncturing canula for *tunneling the insurmountably enlarged prostate;* and perhaps applied to internal *urethrotomy* and *laryngotomy.*

The instruments may be of any size. Of those which I have had made, the largest is the *ovarian trocar*, which has a total length of 12 inches, the handle being 4 inches and the inner canula, besides the portion within the handle, 8 inches, with an internal diameter of half an inch. Dr. Washington L. Atlee used this in his last ovariotomy, and expresses unqualified approval of it. That for *paracentesis abdominis* is exactly half the size of the ovarian trocar. These larger sizes are of German silver, with the cutting portion of steel. The smallest sizes correspond in caliber with Dieulafoy's aspirator needles, but are longer, being $5\frac{1}{2}$ to 8 inches in length, for exploratory sounding, for emptying deep cavities and for other purposes previously named. They are *aspirator needles*, the contact of which will not harm, more than a smooth probe, the brain, the spinal cord, the lungs or the heart, the intestines, the bladder and the joints. These aspirator sizes have both canulas made of very thin steel.

I owe much to the enthusiasm and dexterity of the Messrs. Tiemann, who have accurately and beautifully made all these instruments.

Perhaps I overrate the value of the *dome trocar*, but I do hope the instrument is nearly what I assumed the perfect trocar should be—

1. *Easy of insertion.*
2. *Harmless when inserted.*
3. *Competent for the free passage of fluids.*
4. *Leaving a wound ready to heal.*

RICHMOND ACADEMY OF MEDICINE.

March 4th, 1875.—**Reflex Convulsions.**—Dr. J. S. Wellford has had under treatment a gentleman, 35 or 40 years old, whose early symptoms were slight fever, with a ringing brassy cough, attended with expectoration of sero-mucus, which contained numerous black specks. Slight [bronchial?] hemorrhage occurred when he sat up; the respiratory sounds were roughened at the apex of the left lung; but there was no other evidence of tubercular trouble.

Several days passed by, when suddenly one evening he was seized with a violent convulsion, which was repeated at a little later hour the next evening. On the next day, he was threatened with another seizure (he was taking potas. bromide, gr. xxx, every two hours), when morphia was hypodermically administered, and chloroform was given by inhalation, and continued for several hours, with occasional intermissions, with the effect of preventing the development of a convulsion. Afterwards, however, he had several other similar convulsions, which were checked by chloroform.

The commencement of each of these seizures announced itself by the effort on the part of patient to clutch his throat. During the convulsion, there was the most marked opisthotonos; there was also total loss of consciousness, and respiration was almost entirely suspended. These attacks would last usually only a few minutes; but at one time they were rapidly repeated. In the intervals between the attacks, he complained of pain in the lower posterior portion of the head. Then, also, consciousness was perfect. He was also able to tell when a convulsion was coming on.

In addition to the treatment indicated above, opium, chloral, iodide of potassium, &c., were used. A blister 4×16 inches had been applied over the upper portion of the spinal column. He had taken quinia before the convulsive seizures commenced. At the time of making this report, all treatment has been discontinued, and the patient is doing well. During convalescence, there were heavy deposits of urates from the urine; his bowels were also torpid.

Dr. W. thought the trouble in this case was possibly dependent upon a concealed gouty diathesis—the father of the gentleman being the subject of arthritic disease. Previous to the attack, the patient had undergone much fatigue and exposure during bad weather.

Dr. J. B. McCaw said he had seen cases analogous to the one described, and such instances were not infrequent in children affected with whooping cough. In these cases there is also the

same tendency to grasp the throat preceding or attending the early stages of the epileptiform seizures; there are also discharges of large quantities of glairy mucus from the air passages. Marshall Hall long ago pointed out the sympathy existing between the larynx and the medulla oblongata. Dr. McC. thought the convulsions in Dr. Wellford's case were probably dependent on reflex action of the medulla oblongata, due to irritation of the larynx by the laryngitis.

Dr. L. S. Joynes stated that the case bore some resemblance to laryngismas stridulus—an affection dependent upon other causes than catarrh of the air passages. The convulsions undoubtedly arose from sympathetic implication of the oblong medulla.

Dr. R. T. Coleman believed that malaria was the cause of the trouble, for he did not see how a little patch of subclavicular pulmonary consolidation could produce sufficient irritation to excite such convulsive seizures as Dr. Wellford had described. While Dr. C. was House Physician at Blockley Hospital, Philadelphia, he had a patient whose attacks of spasm of the glottis came on on alternate days, which were followed by no periodic fever or sweating; and yet this man was cured by full doses of quinia. Dr. W's patient had come from a very malarious district, his attacks were periodic, and he had not taken a proper antiperiodic

Dose of Sulphate of Quinia, which was *at least* twenty grains under ordinary circumstances.

Dr. Wellford said that he usually administered quinia in four or five grain doses until the patient was brought under its influence, as evidenced by tinnitus. He had rarely given more than 15 or 16 grains without obtaining this effect. Sulphate of quinia, however, he does not think to be as good an antiperiodic as the bark. The antiperiodic should be repeated with reference to the septenary peculiarities of malarial troubles. Large doses of quinia are sedative—small doses stimulant.

Drs. F. D. Cunningham, O. A. Crenshaw, M. L. James and L. S. Joynes considered 20-30 grs., as a rule, the proper antimalarial doses of quinia.

Dr. Coleman accounted for the present requirement of larger doses of quinia than formerly by supposing that the drug is more frequently adulterated, or that impressibility of patients to its action is impaired by frequent use.

Dr. McCaw did not think Dr. W's case presented any of the phenomena of malaria. As to the larger dose of quinia now required, he attributed it to the fact that pharmacists made the drug *too pure*. In other words, without containing the other al-

kaloids of the bark, it was not a perfect antiperiodic. Fifteen grains of quinia, given within an hour or two of the expected periodic return, is ordinarily a sufficient dose.

Dr. B. G. McPhail usually combined tartaric acid with sulphate of quinia to render the drug more soluble. During his recent experience in Arizona Territory, he was in the habit of giving, with success, 15 grains in three-grain doses during the 10 or 12 hours preceding the expected paroxysm. The dose necessary depends upon the constitution of the patient as well as upon the mode of administration.

Dr. John M. Payne, during his residence in a malarial section of Florida, had found 12–15 grains, given within 6 or 8 hours preceding the paroxysms, sufficient to prevent an attack, except in congestive cases.

Dr. James said that in view of the possibility of a succeeding paroxysm being of the congestive type, he thought the larger doses the safest.

Sulphate of Zinc.—Dr. O. A. Crenshaw stated that he had lately used 2-grain doses of this agent (given three times daily) successfully in two obstinate cases of intermittent fever.

March 18th.—**Report on Public Health** for February, presented by Dr. F. B. Watkins, showed the health of the city to have been good. Of cases of special interest may be noted one mentioned by Dr. Joynes [referred to in our March No.] of

Catarrhal Suppuration of the Antrum Maxillare.—The trouble commenced as coryza, extended to the frontal sinuses, and was attended with severe frontal pain of several days' duration. Then the inflammation settled in the right antrum, with pain, at first deep seated and aching. Then it became neuralgic and very severe, and speedily assumed the intermittent type. As the inflammation thus became localized in the antrum, a free mucous discharge occurred from the corresponding nostril, which soon became distinctly purulent and very offensive to the patient, though not decidedly so to those around him. The treatment consisted of cinchonidia in full doses to break up the neuralgic paroxysms, local anodynes and revulsives to relieve pain, the nasal douche, injections of carbolic acid, permanganate of potash, &c., but nothing did the least good except to relieve the neuralgia. The suppuration, after continuing profuse for many days, very gradually diminished, with decline of the general catarrhal condition. Many attacks of inflammation of the same antrum had occurred during the past 20 years—always catarrhal in origin, and attended with intermittent neuralgia—but the discharge was never before distinctly purulent or offensive. May this change of result be accounted for by the fact that the nerve

of the *first molar tooth* of that side of the upper jaw had been destroyed within the past year, and which seems now to be quite dead? Yet there has been no local symptom pointing specially to that tooth as the source of the trouble.

Renal Tuberculosis.—Dr. M. L. James reported a case of this in a middle-aged colored man. On return from a trip to some watering-place, he suffered intensely with pain in the left lumbar region over the kidney, which was attended by a lingering fever. There were also decided pulmonary symptoms, which had developed within the last three weeks, and the condition of his kidney was suspected. There was an abundant deposit of lithates in the urine. Death. The *post mortem* revealed tuberculosis of the lung, congestion of the peritoneum, and decided deposits of tubercular matter in the kidney. Dr. James remarked upon the rarity of tuberculosis of the kidney.

Dr. Cabell Tabb reported a case of **Puncture of the back of the neck** by scissors on the right of the median line in a child resulting in the escape of a large quantity of fluid like serum.

Dr. Hunter McGuire considered Dr. Tabb's case as one of much interest. The discharge might be cerebro-spinal fluid—if so, cerebro-spinal meningitis was to be apprehended.

Dr. Joynes read a paper on the *Relative Mortality of Whites and Blacks*, [but as this is the subject for the next meeting we omit synopsis of it, as also of the discussion which ensued.]

Chorea in the Negro.—Dr. Edwards stated that Dr. Weir Mitchell had issued a circular asking for statistics on this point. Dr. E. had a personal letter from Dr. M., stating that in a large number of letters received from Southern practitioners, not a case of chorea had been mentioned as occurring in the pure negro. Dr. E. had seen several cases, and therefore could not think his experience so exceptional.

Dr. Hunter McGuire had seen three such cases—perhaps more.

Dr. Geo. West had seen two.

Dr. Augustus Lee had seen two.

Dr. J. N. Upshur had seen two, in one of which electricity had been used with benefit.

Several other gentlemen reported cases as having come within their experience or knowledge.

Nitrite of Amyl.—Dr. Edwards stated that during the past three months he had been using this agent in a case of epilepsy (marked by distinct stomach aura occurring a few minutes before each convulsion) with the effect of preventing the convulsion when taken (2 drops mixed in water) at the commencement of the aura. He mentioned the points made by Dr. Mitchell (see page 44 of this issue).

Dr. McGuire had used amyl in a case of dysmenorrhœa, but the subject was not a good one, or something else prevented the benefit he had hoped to derive from its use.

Book Notices, &c.

Proceedings of the American Pharmaceutical Association at its 22nd Annual Meeting. Held at Louisville, Ky., September 8th–11th, 1874. C. Lewis Diehl, Louisville, *President*; John M. Maisch, Philadelphia, *Secretary*.

The volume, bound in cloth, contains 655 pages of printed matter, besides a number of explanatory illustrations, and a photograph of the late distinguished pharmacist, Prof. Proctor, of the Philadelphia College of Pharmacy. The contents of this book, for the most part, represent the labors for the twelve months preceding the annual meeting of the Association of different committees composed of the leading pharmacists and druggists in the United States. The report of the "committee on the progress of Pharmacy" (in the civilized world) covers 273 pages, and is full of interest both to the pharmaceutical and the medical professions. Some parts of it indeed, as for instance the description of Chinese pharmacy of the present day, would interest the general reader. And in this report the latest developments in pharmacy and pharmaceutical chemistry are presented. The report of the "committee on adulterations and sophistications," which comes next in order, is of great interest to the medical profession. Here we have a complete exposure of the *so-called* "iodo-bromide of calcium compound," which is shown to be nothing more than an aqueous solution of impure commercial chloride of aluminum. Samples of tincture of iodine obtained from 25 different apothecary stores in New York and Brooklyn (℥ss of which should contain about fifteen grains of iodine), were found to contain from four to eighteen grains. Samples of tincture of opium from ten different stores exhibited a similar degree of wreckless or criminal departure from the officinal standard.

The report of the "committee on the drug market" is a valuable paper and of great interest to the pharmacist. Besides the reports of the regular committees above-mentioned, the volume contains a large number of valuable essays and volunteer reports—some of them detailing the results of scientific investigations in answer to "Queries" accepted at the previous annual meeting of the Association. And this system of "Queries"

is, by-the-way, one of the most important features of the Association as well as one of the most useful. Fifty-three of these "Queries" were accepted at the previous meeting to be answered at the late meeting in Louisville. It will be readily seen that the results of this system tends to stimulate inquiry, promote investigation, expose fraud and incompetency, encourage a higher standard in the profession, both morally and intellectually; and while it aids the physician in the successful practice of his profession, is, at the same time, a benefit to the public by ultimately securing to it better medicines and more skillful pharmacists.

The list of the active members of the Association, published in the back part of the book, contains over 1,000 names of pharmacists and druggists in every part of the United States.—B.

[Mr. A. E. Ebert, of Chicago, in his paper "what is cinchoquinine?" says it is "simply the alkaloid cinchonia." This statement is at variance with the analyses of Prof. F. A. Genth, Univ. Penn.; Prof. C. Gilbert Wheeler, Univ. Chicago; Dr. S. P. Sharples, State Assayer Mass., and other distinguished chemists who declare it to contain *quinine, quinidine, and cinchonine.*

But without the evidence these chemists present, any scientific paper with such bitter invectives as characterize this of Mr. E., loses much of its value or importance, for he who seeks the *truth* does not know how much is to be attributed to malignant prejudice. Mr. E. undertakes to lecture the medical journals of the country, "with but few honorable exceptions," and charges that each medical journal "favored with a page of advertisement," was required "to give the article an editorial 'puff,' or an indorsement, by reprinting, as selected matter, *** a communication *** extolling the virtue of this nostrum." *This is not true.* In our June number, 1874, p., 59, we published an extract on cincho-quinine, which did take "the rounds of the medical press," but no "bait" was held out to us that "*If you insert among the reading matter of your journal this article, we will give you a page of advertisement,*" nor was any fee or reward offered or expected for the extract made. Our "reading pages" are devoted to the interests of our subscribers, while the advertising pages are devoted as wholly to the benefits of our advertisers, and we would be glad to know that each one feels himself repaid.—Ed.]

A Dictionary of the English Language. By Joseph E. Worcester, LL. D. Boston: Brewer & Tileston, 1875. Leather. Pp. 1,854, quarto. Price, $10.

This is a book that *is a book!* No physician should be with-

out it. It is so complete and full in its orthography and definitions of medical terms as to render a medical dictionary a book of only occasional reference. It answers all the ordinary purposes of the physician. It is also well illustrated. Worcester's Dictionary has received the highest commendation from the ripest scholars and the purest writers of England and America. Charles Dickens and Louis Agassiz, Edward Everett, George Bancroft, Oliver Wendell Holmes, Henry W. Longfellow, Washington Irving, and William Cullen Bryant all endorse this Dictionary and adopt its orthography. To Worcester's Dictionary the *Medal of Mint* was awarded by the great Vienna exhibition. We have long since adopted this work as our orthographic authority. It was the standard in this particular at the University of Virginia during our student days and it still retains its position at that most excellent institution.

The present edition contains a biographical sketch of the great author. He was the subject about 1848 and 1849 of three operations for cataract in the right eye, and two in the left, the last of which was successful. He died after a brief illness, October 27th, 1865.

Proceedings of the First Annual Meeting of the Eastern [North Carolina] *Medical Association*, Newbern, November 3, 1873. Pamph. pp. 71. H. O. Hyatt, M. D., Kinston, *President;* P. W. Wooley, M. D., *Secretary.*

The organization of this Association, representing one section of the State, thus serving as a more powerful auxiliary of the State Medical Society, is a happy idea; and with a membership already represented by leading physicians in 15 counties, it promises to stimulate scientific culture and professional harmony.

Dr. Hughes, on behalf of the Craven Co. Med. Association, delivered as chaste a welcoming address as any that we have read in other Society transactions. The Secretary's record mentions the title of several interesting, and, no doubt, valuable reports, by different members, some of which would have been of value to the profession at large had they been published at length—judging from the accredited talents of the authors.

We refer to the report of the Executive Committee simply to express surprise and regret that the Society allowed it to be published, containing as it does a correspondence which involved the professional character of two of its most worthy members—especially when charges are not brought against the gentlemen, and which, had they been brought, the Committee itself acknowledges, could not have been sustained. Such publication gives

notoriety to the names of gentlemen that must be at least unpleasant to delicate feelings. It is a serious matter to mention the names of innocent parties in connection with unprofessional practices, especially when one of the objects of the organization is to protect the character of its members.

The address of the retiring President, Dr. C. Duffy, Jr., points out some of the fields of medical science open to useful exploration by Southern practitioners. It is a valuable address, and is replete with suggestions relating to the subject indicated. Incidental mention is made of "a successful aspiration of the stomach through the abdominal walls for the evacuation of a poisonous dose of laudanum," reported by Dr. H. O. Hyatt at the first semi-annual meeting.

Dr. H. O. Hyatt contributes a paper on *Fifteen uses of the India-Rubber Condom*—1. As a means of applying heat or cold over inflamed surfaces. 2. To arrest nasal bleeding as a plug—the condom to be filled with water. 3. Three large condoms filled with ice, and placed one above the other, will answer as a spinal ice bag; or filled with hot water and placed over the spine, it arrests uterine hemorrhage. 4. Tie over nozzle of a syringe and introduce in bladder; then fill with water and it dilates the female urethra. 5. Vaginal tampon. 6. To apply ice to the vagina. 7. To apply ice to uterine cavity. 8. To arrest post partum hemorrhage, introduce condom into uterus and distend with cold or warm water—thus pressing directly against bleeding surfaces. 9. Uterine dilator—3 or 4 condoms passed one into the other and introduced in the cervix are distended by syringe. 10. To apply ice to rectum. 11. To arrest rectal hemorrhage as in No. 8. 12. Rectal stricture dilator. 13. To maintain constant pressure in orchitis. 14. As a syringe. 15. Substitute for Dolbeau's dilator in perineal lithotrity, &c.

Dr. Geo. S. Atmore, Newbern, contributed a very excellent essay upon *Acute Aural Catarrh.* He looks upon quinine as having a direct control upon the migrations of the leucocytes, and as this is the essence of inflammation (Stricker, Cohnheim) he places quinia foremost among the remedies.

Dr. F. Duffy, Newbern, also contributed a good paper on *Individual Physiology*, in which he impresses the importance of studying the peculiarities of each individual person in reference to disease and treatment—the very opposite of empirical custom.

A Study of the Nature and Mechanism of Fever. By HORATIO C. WOOD, M. D. Delivered Jan. 20, 1875. pp. 45. From Dr. J. M. Toner.

This is the fourth of the celebrated Toner Lectures, to which

we have before referred. Dr. Wood concludes from a clinical consideration of the subject that "in some cases fever is undoubtedly a neurosis; whilst in other cases clinical medicine is unable to decide with certainty whether the elevation of temperature is neurotic or hæmic." As to the neurotic origin of fever, after carefully performed experiments and a comparison of views with other authors, Dr. W. thinks that the chief vaso-motor centre is in the medulla oblongata, probably at the point indicated by I. Owsjannikow—that is in cats, in "a space whose upper boundary is one or two millimetres below the corpora quadrigemina, and whose lower boundary is four to five millimetres above the point of the calamus scriptorius, a space of about four millimetres." He believes with Tscheschichin, that there must be "in the pons or above it a nerve centre whose function is *** production of animal heat," which is spoken of as the *inhibitory chemical centre.* The rise of temperature, in many cases independent of the circulation or respiration, is due to excitation of this centre.

But the points made by Dr. W. cannot be properly noticed in less space than that required by the lecture itself, and we must therefore content ourselves by referring those interested in the study of the subject to the lecture.

Examination of the Urine. By Geo. B. Fowler, M. D., Examiner in Physiology, Col. Phys. & Surg. N. Y., etc. New York. D. Appleton & Co., 1874. 12 mo. pp. 80.

The arrangement of this practical little guide-book is: Part I. 1. Characters of Normal Urine; 2. Effects of reagents upon it. II. Character of Abnormal Urine. III. Urinary Deposits. 1. Natural Constituents, either separately or in combination; 2. Foreign Constituents. IV. Accidental ingredients which do not form deposits. V. Quantitative analysis. VI. Calculi and gravel. The manipulations are stated in as plain terms as possible. Brief outlines of the physiological and pathological influences bearing upon the subject are introduced, with the purpose of assisting the student in studying the subject by revealing its practical import.

This manual is not of special service to experts, for it is rudimentary; but it is of value to students and to practitioners who have limited chemical education. But as it is utterly impossible for the majority of busy physicians to be expert chemists—expert enough at least to derive satisfactory results from chemical examinations of the tell-tale secretion, urine—there should be specialists in this department, who should receive the support of the profession. We have at least one such specialist in our city, whose reputation as a chemist, however, is not local.

Acute Rheumatism in Infancy and Childhood. By A. JACOBI, M. D., Prof. Dis. Children, Col. Phys. & Surg., N. Y. New York: G. P. Putnam's Sons, 1875. Pamph., pp. 38. Price 40 cents.

This is No. 2 of the *Series of American Clinical Lectures*, edited by Dr. E. C. Sequin, to which we called attention in our March No. The series is heartily commended. The special value of these lectures is that they are practical in their teachings. We have not the space to analyze the valuable paper before us, where it seems that every line almost contains some important statement. Greater prominence, however, is given to large doses quinia as a curative agent—rather as an antiphlogistic—than has hitherto been done by text-books—remembering always to administer a more soluble form than the sulphate, such as the bi-sulphate or the muriate. In the choreic manifestations, arsenic is the chief reliance.

Other pamphlets received: *Sects in Medicine*, by John C. Peters, M. D., President Med. Lib. & Jour. Assn., etc. New York: J. R. McDivitt. 1874. *Migrants and Sailors in Relation to Public Health*, by John M. Woodward, M. D., and Heber Smith, M. D., U. S. Mar. Hosp. Service, (Reprint). *Report, &c., of Texas Lunatic Asylum, from Feb.* 10 *to Sept.* 30, 1874, Dr. D. R. Wallace, Austin, Superintendent.—*First Annual Report of Harrisburg* [Pa.] *Hospital*, May, 1874. From Dr. Thomas J. Dunott, one of the Surgeons;—*Mortuary Report of Savannah* (Ga.) 1874, by Dr. Wm. Duncan—394 whites and 642 negroes.—*Report of Surgical Cases Treated at St. John's Riverside Hospital*, Yonkers, N. Y., by J. H. Pooley, M. D., Surgeon, &c. (Reprint).—*Relations of Nervous System to Skin Diseases*, by L. Duncan Bulkley, A. M., M. D., (Reprint);—*Operations of Government Hospital for Insane*, 1874, Washington, Chas. H. Nichols, A. M., M. D., Supt.

Editorial.

HEMORRHAGIC MALARIAL FEVER.—CORRECTION.

We thank Dr. D. R. Wallace, Austin, Texas, for calling our attention to some errors in our notice (Feb. No.) of his Report in the Texas Transactions on *Hemorrhagic Malarial Fever* which should be corrected. In a personal letter he states that we were mistaken in the supposition that he opposes the use of quinia.

"On the contrary," he says, "I am clearly of opinion that there is no case, even of this malignant disease so malignant that the timely exhibition of quinia would not relieve it. Even those cases in which it might seem that the outbreak of the disease is caused by the remedy,* its timely judicious use, would have anticipated.

"The mortality in McLennan County was based on County Society Statistics—not my own. I have treated over a dozen cases in the County with loss of only one case. I know of no locality in the South where the exhibition of quinia is more unsparing than by the Waco physicians. McLennan is not a very malarial district. Here the disease is nothing like so commonly met with as in the more Southern line of counties.

"But as noted in the opening sentence on treatment in my Report, where the disease occurs most seldom, it is there most virulent. In some very malarial districts of Southern Texas, it is little more fatal than other miasmatic affections—so also in the swamps of Louisiana; while in 1866–7 in certain counties of Alabama, as noticed by Dr. Michel and others, nine-tenths of those attacked died. Whatever may be the explanation of the paradox, the fact is undeniable."

A re-reading of Dr. Wallace's report as suggested by him, also convinces us of an error which we committed, in supposing that he denied the sedative virtues, *per se*, of large doses of quinia. It is due ourselves to state, however, that the haste in which Dr. W. was compelled to prepare his report prevented him from stating his views distinctly on this point. In his letter, Dr. W. states "I have two patients in this Institution [State Lunatic Asylum, of which Dr. W. is Superintendent] to whom I give it to quiet and induce sleep."

We are always glad to have such letters of correction whenever they may be necessary.

Correction.—In the prescription in Dr. S. W. Dickinson's paper on *Chylous Urine*, p. 737, vol. I, read *two* ounces of muriatic acid instead of eleven.

* "Now, in the absence of any other explanation of the fact that sulphate of quinia is occasionally the exciting cause of hemorrhagic malarial fever, this hypothetical one is given: From some part or parts of the economy already belabored by malaria, and upon which an extra amount of innervation (so to speak) has been determined to assist in its efforts to sustain itself, quinia, by its equalizing properties, [effect upon the circulation,] diverts such extra nerve force, depriving such part or parts of the means of support that nature has provided; and in this manner a way is open for an accession of the disease." Page 37, *Texas Trans. &c.*

MEDICAL COLLEGE OF VIRGINIA.

Notwithstanding the rain of March 1st, a large audience was present at the commencement exercises of this institution. Dr. J. B. McCaw, Dean, after sketching the history of the College for the past 37 years conferred the degree of Doctor of Medicine upon the following gentlemen: Chas. J. Brittan, James F. Crane, C. W. Dean, Richmond; D. F. Hanna, Greenbrier Co., W. Va.; John W. Poindexter, Charlottesville, Va.; Gaston A. Shumate, Giles Co., Va.; Lewis P. Sorrell, Raleigh, N. C.; Albert L. Terpening, West Exeter, Otsego Co., N. Y.; Sanford W. Thompson, Wake County, N. C.; Robert Whiting, Petersburg, Va.; John A. Young, Warwick Co., Na.

Prof. J. S. Wellford presented certificates of graduation in Pharmacy to Francis M. Carey and Wm. T. Harris, Richmond.

Prof. F. D. Cunningham, in a most happy style, then presented Dr. Brittan with the Faculty-prize (a neat pocket case of instruments) as the author of the best essay on *Pyæmia*. The prize is awarded by a committee of medical gentlemen not connected with the College, and who have no knowledge as to who are the authors of the several essays submitted.

It was deeply regretted that Rev. Dr. M. D. Hoge was unable to deliver his address to the graduating class on account of the noise of the rain falling upon the roof.

Graduates in other Medical Colleges.—University of Maryland, 50; commencement March 6th.

College of Physicians and Surgeons, Baltimore, 39.

Washington University of Medicine, Baltimore, 26; Feb. 25.

Jefferson Medical College, Phila., 170; March 11th.

Hospital College of Medicine, Louisville, 56; Feb. 26th.

Mobile Medical College, 34; March 19th.

VIRGINIA STATE BOARD OF HEALTH.

We are ashamed to have to confess that the Virginia Senate, by a vote, taken March 19th, of 15 ayes to 18 noes refused to make the necessary appropriation to place the State Board of Health upon a working platform; although we predicted the result in our February issue, and this we did from an intimation as to the calibre of a large part of the Legislature. Men who talk of *repudiation*, as such, of just and incontrovertible debts, or

of withholding a petty annual allowance to maintain the State University, or of taxing church property for State purposes, and such things as these, are shallow-minded enough to be anything except politicians in the true sense of the term. Such men should not be returned to the General Assembly, nor ever honored hereafter with positions where legislation is involved.

Legislators have mistaken the matter entirely if they suppose that the members of the proposed Board of Health, or that physicians as a class or individually are in any manner more interested in the success of this measure than other good citizens of the Commonwealth.

But in keeping with the principles of their profession, physicians stand as the guardians of public health—and they do their duty faithfully in bringing this subject to the attention of the Legislature whose plain duty it is to act in accordance with the suggestions which have been given by men of eminence and special acquirements. In this matter the mechanic and capitalist are alike interested. But it is the material interests of the State itself that would be specially benefitted by the active operation of a properly constituted Board of Health; and hence it is that the Legislature is to be censured for the defeat of the proposed measure. We will not reiterate the hackneyed, though unanswerable arguments in favor of the full establishment of the Board. These will occur to men of learning upon this allusion to them; while even the demagoguic argument of State economy is also strongly in favor of the measure.

Alabama State Board of Health.—The Legislature has just constituted the Medical Association of Alabama the State Board of Health. The session of the Association at Montgomery will be the first under the new law. The measure is looked upon as the commencement of better days in Alabama. We would be rejoiced to learn of the successful working of the plan adopted; but an efficient Secretary or Executive Officer cannot be constantly engaged without remuneration—at least, it would be unjust to expect it.

Dr. John J. Caldwell, of Baltimore, read a paper March 18th on *Electricity in Medicine and Surgery, with Reports of Cases, &c.*, before the Medical Society of the Alumni of the Georgetown University, which is spoken of as having been a most able contribution on the subject.

MORTUARY STATISTICS OF SOUTHERN CITIES FOR FEBRUARY, 1875.

(Compiled from Reports of the several City Boards of Health.)

Cities	RICHMOND, VA.				NORFOLK, VA.				LYNCHBURG, VA.				MOBILE, ALA.				SELMA, ALA.				ATLANTA, GA.			
Health Officers, ...Doctors	J. G. Cabell.				Wm. M. Wilson.				R. S. Payne.				W. D. Bizzell.				John P. Furniss.				E. L. Connally.			
Population	Census Feb., 1874, though estimated at 65,000.				Estimated.				Estimated.				Census 1870. In addition 1,200 Creoles are estimated				Estimated.				Census 1873, tho' estimate is 35,000.			
	White. 33,452		Colored 27,213		White. 12,500		Colored. 8,500		White. 6,500		Colored. 6,500		White. 18,115		Colored. 13,919		White. 3,500		Colored. 4 000		White. 18,526		Colored. 11,607	
Sex	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Number of deaths	22	13	36	34	4	6	9	7	6	8	17	11	31	14	39	43	2	2	4	1	21	17	9	18
Number still-born in addition	3		1		1		3		0		4		2		6						5		4	
Ages. Ages unknown not calculated. Under 1 year	4		14		2		4		Color not given....18				5		17		1		...		10		9	
" 3 years	6		11		1		1		" " 2				1		8		...		1		...		5	
" 10 "	3		5		1		1		" " 2				4		7		....		1		2		3	
" 20 "	1		5		...		1		" " 0				6		5		....		...		...		...	
" 30 "	5		7		1		3		" " 5				6		14		1		1		6		2	
" 50 "	10		10		3		2		" " 3				11		19		2		1		16		4	
" 70 "	6		9		1		2		" " 6				9		6		...		1		3		2	
" 80 "	...		1		...		1		" " 4				3		3		...		...		1		2	
" 100 "	...		5		1		1		" " ...				3		2		....		...		...		...	
Over 100 "	...		1		...		...		" " ...				...		1		....		...		...		...	

Norfolk.—Health Officer writes March 4: "There are no infectious or contagious diseases here; in fact, I have never known the city to be so healthy."

Mobile.—Health Officer writes, March 9: "Forty-four deaths from small-pox last month, although there were almost as many in a single week during December. *** Still a few cases of diphtheria. In last two weeks several exceedingly mild cases of scarlatina."

Montgomery, Ala.—Mortality during February: Whites 14; colored 26. Causes not given; 3 whites and 7 colored non-residents.

Baltimore, Md.—Mortality during the week ending Feb. 27: 202 deaths—increase of 73 over corresponding week in 1874, and of 53 over the previous week 1875. Consumption caused 34 deaths, scarlatina 24, whooping cough 7.

CAUSES OF DEATH.

Abscess	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Accidents, Suicides, Wounds, &c	2	8	.....	.....	.....	.....	2	5	.....	1	1	.....
Alcoholism, Delir. Tremens, Intemp'nce	.....	.....	.....	.....	1	.....	...	.....	1	.....	.....	.....
Apoplexy	.....	1	.....	.....	.....	.....	3	2	.....	.....	.....	.....
Ascites, Dropsy, &c	.....	.....	.....	.....	1	.....	.....	1	.....	.....	2	2
Asthma	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Birth, Premature	.....	2	1	.....	.....	.....	.....	1	.....	.....	.....	.....
Brain Disease	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Bright's Disease	.....	.....	.....	1	.....	.....	2	3	.....	.....	.....	1
Bronchitis	.....	1	.....	.....	1	.....	2	1	.....	1	.....	.....
Cancer	1	1	1	.....	1	.....	1	1	.....	.....	1	.....
Cholera Infantum	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Congestion of Bowels, Brain, Lung	2	2	.....	.....	.....	2	.....	.....	.....	.....	4	2
Consumption	6	8	1	4	3	.....	10	5	.....	2	9	1
Convulsions	2	2	.....	2	.....	1	.....	1	.....	.....	.....	.....
Croup	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	2
Diphtheria	.....	.....	.....	.....	.....	...	2	.....	.....	.....	.....	.....
Diarrhœa & Dysentery	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eczema of head and face	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Enteritis	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Epilepsy	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Fever, Congestive	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
" Hæmorrhagic Malarial	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
" Intermit	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
" Typhoid	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Fistula	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gastritis	1	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	1
Heart Disease	3	3	.....	.....	.....	.....	2	2	.....	.....	.....	.....
Hernia, Strangulated	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inanition, Old Age, &c	1	8	2	2	1	1	2	5	.....	.....	.....	.....
Intussusception	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Meningitis, Cereb. Spinal	.....	1	.....	.....	.....	2	.....	4	.....	.....	.....	.....
" Tubercular	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....
Mesenteric Disease	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Paralysis	.....	3	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Parotiditis	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Pleurisy	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....
Pneumonia	6	12	.....	4	1	.....	2	1	1	1	9	13
Pyæmia	1	.....	.....	... ..	.....	.....	.....	.....	.....	.....	.....	.....
Scarlatina	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scrofula	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Small-pox	.....	.....	.....	.....	.....	.....	7	37	.....	.....	.....	.....
Syphilis	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tabes Mesenterica	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Teething	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trismus Nascentium	.....	.....	.....	.....	.....	.....	1	4	1	.....	.....	.....
Tuberculosis, Acute	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Unknown	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	6	3
Whooping Cough	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1

MEETINGS OF SOCIETIES.

American Medical Association.—The 26th annual session will convene in Louisville, Ky., 11 A. M., Tuesday, May 4th, 1875. Delegates must receive their appointments from their local Medical Societies recognized by the respective State Societies. Each Society is entitled to one delegate for every ten active members, or fractional part of ten over five. Secretaries of Societies should forward lists of delegates at once to the Secretary, Dr. Wm. B. Atkinson, Philadelphia.

Medical Association of Alabama.—The next session will be held April 13th, in Montgomery. We are advised by the Secretary, Dr. Benj. H. Riggs, of Selma, that delegates from neighboring State Associations will be hospitably received and cordially welcomed. The session will be a very important one to the profession of that State.

Medical Society of North Carolina.—The next session will convene in the town of Wilson, Tuesday, May 18th. The Medical Society of Virginia has appointed nine fraternal delegates to attend. Dr. James McKee, Raleigh, Secty.

Tennessee Medical Association will hold its 42d annual session in Nashville, April 6th, 1875.

South Carolina Medical Association will convene in Charleston April 13—Henry D. Fraser, Secty.

Our Thanks are hereby returned to Dr. A. C. Garratt, Boston, Mass., for one of his "long disks" (4×12 inches, 24 poles)—a size the manufacture of which he has lately commenced. Dr. Garratt, as is well known, occupies a prominent position in the profession as an electrologist. His disks are approved by so many men of eminence that no testimonial is required of us; and yet, were it of value to the more general use of the disk in the class of cases for which it is designed, we would most cordially recommend it—basing the recommendation upon results obtained in several cases in which we have applied it.

Superintendent of Health for Wilmington.—The Legislature of North Carolina has created the above officer. The duties of the incumbent (not yet appointed) will be to give medical attention to the city prisoners, to such out-door poor as the Mayor may direct, and particularly to those with contagious diseases. In case of the outbreak of infectious diseases after a vessel has passed quarantine inspection, he shall have power to return the vessel to quarantine at the mouth of Cape Fear River. He is also to keep on hand good vaccine matter, and to vaccinate the poor of the city. He has nothing to do with the mortuary reports nor the sanitary condition of the city further than above detailed. Salary, $100 per month.

VIRGINIA
MEDICAL MONTHLY.

VOL II. RICHMOND, MAY, 1875. No. 2.

Original Communications.

Pneumonia. By JOHN C. PETERS, M. D., of New York.

By pure pneumonia, we understand an inflammation of the air cells alone. Of these there are 600,000,000, varying from $\frac{1}{70}$ to $\frac{1}{120}$ of an inch in diameter. The walls of these cells are formed of an exceedingly delicate membrane of connective tissue, which serves to connect the numerous capillaries of the walls. The walls of the air cells are lined on the inside with epithelium different from that of the air tubes, so that disease does not extend readily from one to the other. They are covered on the outside by numbers of elastic fibres, which dilate during inspiration, and contract during expiration, so that the air cells and lungs follow all the motions of the thorax during respiration most accurately; always lying in contact with every part of the internal surface of the chest. Each minute air cell is surrounded by a loop or circlet of the pulmonary artery, from which most delicate capillaries are spread all over the tiny cells, often running between each epithelial cell which lines their internal surface.

So delicate is all this complex structure, that the space between the air in the cells and the blood in their capillaries is only $\frac{1}{2400}$ of an inch; allowing oxygen to pass from the air vesicles into the pulmonary artery capillaries, and carbonic acid to pass from the latter into the cells; for both cells and capillaries are permeable by these gases, and may easily become so by the moisture of the air and the serum of the blood. As all the impure venous blood of the body is brought from the venæ cavæ and right side of the heart, through the pulmonary arte

ries to the outside of the air cells, these are subject to disease, both from the atmosphere without and from contaminated blood within.

The simplest form of pneumonia is that caused by the inhalation of intensely cold, either pure and dry or raw moist, air, while the rest of the body is adequately protected from the weather, causing a state of portions of the lungs which may be compared remotely to a frost-bite.

The next most simple, and, perhaps, most common form, arises from the simultaneous inhalation of cold air, and a sudden or prolonged chill of the surface, causing a check of perspiration or a suppression of the functions of the skin. This involves much more than the simple retention of a large quantity of watery fluid—although it is calculated that from 24 to 30 ounces of insensible perspiration should be exhaled by the skin per day, or about 1 ounce per hour. As the kidneys only excrete 2 ounces of fluid per hour, or 48 ounces per day, we might expect almost one half the amount of the disorder from a complete check of perspiration, that we would from entire suppression of urine. But the skin only excretes 150 grains of urea, while the kidneys throw off 500 grains per day. Hence we have less than one-third of the uræmic contamination produced by a check of perspiration that we do when the renal secretion is suppressed. Still, we get a slight degree of uræmia as the cause of some blood impurity, with a tendency to irritation and inflammation of various organs; the lungs among the rest. But lactic, formic and butyric acids are also naturally excreted by the skin, and a retention of these acids produces a rheumatic tainting of the blood, closely allied to the lactic, or, perhaps, lithic acid diathesis. We may assume here, as has often been proven clinically, that a large portion of the pneumonias in previously healthy persons are not simple, but somewhat rheumatic in their nature; or, at least, have a strong tendency that way.

Still, a large number of apparently simple pneumonias seem to arise spontaneously, without any special exposure to cold and wet. Dr. Flint says, "an adequate internal cause, of course, always exists, but its nature and source are not understood. Nor is every one able to explain, with his present knowledge,

the development of the disease when it follows an obvious cause, such as exposure to cold." But some light has been thrown on both of these points by Drs. Todd and Murchison. Dr. Todd, who has the credit of priority, writes: "Simple, primary pneumonia is very rare: *i. e.*, one that is completely free from some complication with, or dependence upon, some peculiarity of the constitution. If two men, A and B, both in apparently good health, be exposed to cold at the same time, and for the same period, A may get an attack of pneumonia, but B will not. Now at first sight one can scarcely conceive why the disease should assail the one and not the other; for both were apparently well at the time of exposure to cold. But, if we carefully examine the previous history of the two individuals, we will find that A has a rheumatic, or lactic acid; or a gouty or uric acid tendency; or some peculiar blood diathesis of this kind, which B does not possess. And it is for this reason that A is seized with the pneumonia when subjected to the same influences which produced no such injurious effect upon B." Murchison has elaborated this idea a little farther. He says: "Having paid considerable attention to the matter, he is satisfied that persons with the lithic acid diathesis are much more prone than others to ordinary febrile colds, as well as more severe local inflammations. They may appear robust and healthy up to the sudden occurrence of the inflammatory attack; but they have not been in an absolutely normal state of health." He "has also had occasion to observe that in certain persons who habitually pass an excess of lithates in their urine, these cease to be eliminated on the advent of an ordinary febrile catarrh, but will again be discharged in abundance on the subsidence of the fever." In such cases, the lithates probably irritated and inflamed some organ, the lungs, perhaps, to such an extent that these irritating substances were all retained in the system until the resolution of the attack. In short, "the retention of the lithates in the system probably determined the local inflammation." Murchison terms this disorder, for it requires something more to make it a disease, *lithæmia*. Dr. Flint had previously described a similar affection, but called it *uricæmia*. But both of these great authorities were rather inclined to think that it tended to produce gout and arthritic in-

flammations; rather than a rheumatic state of the blood and system, and rheumatic inflammations.

Although only about 10 or 12 grains of uric or lithic acid are excreted from the kidneys in 24 hours, or merely half a grain per hour, yet it must be formed in enormous quantities in the system; as all the highest physiological writers declare it to be the source of urea, of which 500 grains are thrown out per day. Uric acid is exceedingly insoluble, requiring 14,000 parts of cold water for its solution. Yet, like sugar, starch and casein, none of which form absolute tissues of the body, or are found in the blood, uric acid has to be rapidly oxidized in the system in order to be converted into soluble urea, which is the most important and abundant constituent of the urine. If this rapid destruction of uric acid does not take place, then the lithæmia of Murchison or the uricæmia of Flint is produced; just as diabetes is caused if the sugar of the food and liver is not rapidly destroyed; or amyloid disease, if starchy matters are not quickly converted into sugar; or caseous or tuberculous disease, if the casein of the food is not rapidly converted into albumen or fibrin. Murchison places more stress than most medical teachers on the function of the liver in producing uric acid and urea. He says that the liver is a blood-purifying organ which contributes in a great degree to the destruction of the protein substances derived from the food and tissues; and to the formation of lithic or uric acid, which is subsequently eliminated by the kidneys in the form of urea.

We can now easily understand how even robust persons, with antecedent slight derangements of the functions of the liver and kidneys, may easily become subjects of pneumonia, if they are exposed to cold and wet, especially if they were previously fatigued and fasting, or too thinly clad. And that a timely dose of simple bilious or renal medicine, or both, might have warded off an attack; which also might not have occurred without some unusual or imprudent exposure to severe qualities, or changes of the weather.

When pneumonia arises from the side of the blood and blood vessels, the immediate pathological cause is the presence in the blood of an irritating or noxious material, produced within the system by some disturbance of the nutritive and eliminating

processes, such as are above described. But before this material can get into the air cells, it must traverse the walls of the pulmonary arteries, and pass through the connective tissue which intervenes between them and the air cells. But the nutritive fluids always do this; and the white blood-cells or emigrating corpuscles or so-called leucocytes also, even in health; and more so in fevers and inflammations, in which the capillaries become dilated and crowded with both white and red blood globules.

Formerly only dead connective or cellular tissue was examined by histologists; but now, thanks to vivisections, the living has been observed. Kühne, quoted by Frey (*Histology and Histo-Chemistry of Man*, p. 212), says, "In addition to the well known fixed connective tissue corpuscles, this membrane, as seen in the thin transparent lamellæ which occur between the muscles of the living frog, also contain lymphoid cells, which have evidently emigrated from the blood vessels; so that the cells of connective tissue must be divided into the fixed and wandering. "The latter have the power of unmistakable vital contractility; their form changes, and they move, although nothing can be seen of pre-formed paths. The almost mucoid consistence of the inter-cellular substance allows free play to their motions in all directions." (p. 213.)

In inflammation, all this is intensified. The capillaries dilate, with elongation and tortuosity. The veins enlarge after a time, with irregular bulgings. The capillary walls become softened, as well as distended. Complete stasis or stagnation of blood occurs; the vessels appearing crowded with blood corpuscles; the white corpuscles accumulate and adhere to the walls of the vessels. After a while, the latter penetrate the walls of the capillaries, and may be observed in various stages of their transit, forming elevations, and finally separating altogether, to travel into the connective tissue. The white blood corpuscles, or so-called lymphoid cells have the power of spontaneous movement; of altering in shape; and of actually digesting the protoplasm of the vascular walls by virtue of their amæboid nature; so that no actual opening is left showing where they have escaped through the capillaries. These liberated or emigrating white corpuscles (according to Roberts and many others), to which the name of *leucocytes* is given, after they leave the capillaries, send out pro-

cesses, assume peculiar shapes, and migrate far and wide into the surrounding tissues; often also undergoing division, becoming increased in numbers, and thus contributing to the formation of the various cellular and exudative substances met with in inflamed tissues. In many cases some red globules also migrate through the walls of the vessels, but not nearly to the same extent as the white blood cells. Dr. Lionel Beale takes a slightly different view, in assuming that in addition to the white blood corpuscles in inflammation, little particles of the *bioplasm*, or germinal matter of the blood, pass through the capillary walls, and afterwards grow and multiply by division. He thinks that "most of the particles seen outside of the blood vessels originate in this way, and not from the direct transit of the white corpuscles." If this takes place in excess, it probably produces granular degeneration of the part; while, if the white corpuscles predominate, cell growth and hyperplasia, with hypertrophy and solidification of tissue, take place.

"Generally, an exudation of liquid, more or less approaching to liquor sanguinis, also occurs. It may be mere serum; but as a rule, contains fibrin, as well as albumen, and also phosphates, chlorides and carbonates."

The fixed connective tissue corpuscles which are always present in areolar membrane, now begin to increase in size; new nuclei form in and divide them, so that another kind of active formation of cells, or cell proliferation, is produced, in addition to the abundant accession of leucocytes and of particles of bioplasm. All these processes finally extend through the connective tissue to the walls of the air cells, and penetrate them, producing the same changes within them that we have seen first occurring outside of them.

As all these varied actions are mainly mere exaggerations of natural nutritive processes, they may stop at any time, or retrogade and resolve and pass away. Or if the exudation which escapes contains so much fibrin as to be coagulable, then plastic fibrinous and coagulable lymph deposits, or membranes, are formed, or absolute development of new soft tissue takes place.

If the exudation is mainly cellular, with little or no fibrin, then there will be but slight tendency to organization, but rather a proneness to the formation of pus and other low products.

Pus consists of an albuminous fluid, liquor puris, which is blood serum modified by disease, in which float pus corpuscles and other microscopic particles. Pus corpuscles closely resemble white blood globules, both in size and appearance; they have the power of spontaneous movement and migration; and it is now generally admitted that the great majority of pus cells are merely white blood globules which have migrated and undergone some changes. The fixed connective tissue corpuscles may also enlarge, divide, and be transformed into pus globules; while Beale assumes that many pus corpuscles in their living state are merely masses of bioplasm, without any cell wall, which assume a variety of forms, send out protrusions in all directions, which, becoming detached form new pus masses, &c. When dead, pus particles become globular; their active movements cease, a cell wall forms for the first time around them, and they assume all the appearances of ordinary pus globules. They may become granular, and bacteria be developed in them; or they may undergo fatty or cheesy degeneration.

Thus far, nothing widely different from what is believed by the best authorities has been advanced, although I have enlarged the lithæmic theory of inflammation. But my views about caseation, tubercularization and scrofulosis are, I believe, novel, and I hope, true. Casein exists in milk, both in the milk serum and in the walls of the milk globules. There is no albumen or fibrin in milk—only butter, sugar, casein and salts. Casein is an albuminate of potash, while blood albumen is an albuminate of soda; and each not only can, but must be converted into each other. There is little or no casein in the serum of the blood, but much in the globulin. Connective tissue is the only structure of the body which contains casein in its juices; and this tissue is the breeding place of tubercle and scrofula, which affect the glands only secondarily. In pneumonia and acute inflammatory rheumatism, we have a higher proportion of fibrin in the blood than in any other diseases. But if, from a low state of health or some local condition, the casein which is taken in our food is not properly converted into albumen, and this into fibrin, a hyper-caseous condition of the globulin of the blood, and of the juices of the connective tissue, will occur; which, under the stimulus of secretion, congestion or inflammation, may

lead to exudations which rapidly undergo caseous degeneration, and become scrofulous and tuberculous. I claim this theory as my own.

In pneumonia, the fibrin of the blood is greater in amount than in any other disease, except acute inflammatory rheumatism. In addition to excessive formation of fibrin, this excess may arise from deficient destruction of it in the liver. There is no doubt that the fibrin of the blood is largely disintegrated in the liver; for Lehmann and Claude Bernard have shown that while portal blood contains much fibrin, that from the hepatic vein includes little or none. Brown-Sequard also affirms that enormous quantities of fibrin are daily lost to the blood in its passage through the digestive organs and liver. Hence, if anything occurs to interfere with this fibrin-destroying function of the liver, there will arise a hyperinosis and a tendency to inflammations, which assume a rheumatic character if there is a simultaneous excess of lactic acid in the system; and which may fall upon the lungs from exposure to cold.

We also know that the protoplasm of the blood is albuminous, but by dissolving it with the dilute alkali or potash of the blood, and then acting upon it with some acid, like acetic or lactic, *casein* will be formed, and the inflammation may assume a caseous or tuberculous nature.

From the side of the air cells, pneumonia may arise from the inhalation of various poisons, such as marsh miasm, measles, scarlet fever, diphtheria, typhoid fever, &c. In all these, as well as in ordinary pneumonia, from the inhalation of cold air, the first assault must be made upon the epithelial cells, which line the air vesicles. These delicate epithelial cells may be almost killed by excessive cold, and also by any of the above-mentioned noxiæ. The normal destruction of epithelial cells in the air vesicles is brought about partly by mere mechanical attrition, after which they are dissolved by the alkali of the blood serum; and thus a certain large quantity of albuminoid matters are cast out of the system daily by all the mucous membranes. According to Frey, decaying epithelia are also of the greatest importance in the formation of mucus; for this fluid does not come from the mucous glands alone, but consists of cast-off epithelial cells, as well as gland cells, and has in it besides, nume-

rous small cells, closely resembling the white blood cells, and those of chyle and lymph. Thus, mucous corpuscles may spring, not only from epithelial cells, but also from those of the blood, connective tissue and lymphatic organs. Hence, we can see how easily contaminated blood cells may convey disease into the air-cells themselves. According to Frey, the old idea as to the formation and origin of mucus as being solely the secretion of special glands, can no longer be held; as the proportion of mucus stands only in a certain relation to the frequency or scarcity of these glands. The synovial capsules secrete mucus; yet they they have no glands. The greater part of mucus is formed by the normal alkaline serous fluid of the blood transuding through the capillaries of the mucous membranes, macerating the cast-off epithelial cells, and transforming them into *mucin*, which is merely a physiological transformation product of epithelial tissue. Thus, synovia from the joints not only resembles mucus, but contains 4 parts per 1,000 of mucin, while mucus has 24 parts. But synovia has 25 parts of albumen, while mucus has only 9; and merely 1 part of fat, while mucus has 3; and 10 parts of salts to 8 in mucus. Synovia is an alkaline fluid made from the epithelial cells of the capsule of the joints, and from the lymphoid corpuscles, dissolved in the serum of the blood. In the air cells, each epithelial cell is surrounded by a delicate capillary. An excessive destruction or shedding of epithelial cells leaves the surface of the air vesicles bare and raw, as if the epidermis of the skin had all been peeled off, and the true skin left naked and exposed. Irritation and inflammation must follow.

Pneumonia differs from most other inflammations in that the capillaries going to the air cells, viz: those of the pulmonary arteries, convey venous and impure blood. In all other parts of the body the impure venous blood is being carried away from the tissues as rapidly as possible, and it is only wonderful that septic and dyscratic pneumonias, frequent as they are, are not more common.

We can now easily understand how even robust persons, with antecedent but apparently slight derangements of the functions of the liver, kidneys and skin, may easily become subjects of pneumonia. This will be doubly the case with those who are

constitutionally feeble, or suffering from any lowering chronic or acute disease, as well as during convalescence from the latter, before all the depurating processes from the blood, by means of the liver, skin and kidneys have been completed. Also, why pneumonia is prone to arise in chronic blood diseases, and in low fevers, like typhus and typhoid, pyæmia, puerperal fever, &c. Also, in chronic alcoholism, with its attendant disorder of the liver, skin and kidneys, and accompanying degeneration of tissues. A man may be saturated with alcohol; every organ of his body may be under its influence; he sits in a draught or becomes chilled, and a pneumonia of a peculiarly severe and dangerous type will follow. Finally, all persons with chronic heart disease and its accompanying long continued congestion, not only of the lungs, but also of the liver and kidneys, are peculiarly liable. Also, old and weak persons who are confined to bed, not only get congestion of the lungs from their recumbent position and feeble circulation, but from the deranged tissue-change which takes place in them, and the imperfect action of their excretory organs. Finally, poverty, residence in the foul air of large towns, and crowded, filthy rooms—especially if varied with occupations involving exposure to the inclemencies of the weather and over-exertion—and complicated by poor food and intemperance, become the causes of pneumonia, both from the side of the air and the blood; especially in cold seasons marked by very low ranges of temperature, rapid changes of weather in which warm winds are followed by those which are cold and wet.

But, notwithstanding all this, the general tendency of pneumonia is to recovery, provided the disease is not too extensive. We know that if one-third of the skin is scalded or burned, that death is apt to take place. The lungs are more important than the skin; and the expanded surface of the air cells amounts to 2,000 square feet, or much greater than that of the cutaneous surface; so that the element of extent must come into the prognosis. Next comes the comparative previous health of the patient—the integrity of his great excretory organs; and last, but not least, the care which is taken when the natural crisis of the disorder is about occurring. Niemeyer says, we now know that, almost more than any other severe acute disease, if left to itself

pneumonia, in a vigorous patient, if uncomplicated and of moderate intensity, will almost always end in recovery. The symptoms at first continue with constant or increasing severity until the critical day, which generally arrives towards the end of the first week; and while the condition of the patient from dyspnœa, thirst, fever, and intense constitutional disturbance, is beginning to awaken an earnest solicitude, a striking and often sudden change takes place, often within a few hours. The temperature and frequency of the pulse often sink rapidly; the dyspnœa abates, and the patient feels easier and better. He sleeps, calls for food, and convalescence is often fully established in 24 hours, or recovery progresses steadily. The temperature not unfrequently falls below the normal standard, and Niemeyer has repeatedly seen the pulse sink to 40 beats in a minute, although the patient had not taken a grain of digitalis, or of any other arterial sedative.

Many cases corroborative of this view are given by Skoda, Wunderlich and others; but the one which is most easy of access, and the most instructive is given by Parkes, in Aitkin's Practice. It occurred in a well-built, adult, temperate man, weighing 140 lbs., whose case had been neglected until the third day. He had high fever, flushed cheeks, frequent cough, viscid, bloody expectoration, hurried breathing, with crepitation and bronchial respiration over the base of the left lung behind. The roots of the lungs, where pneumonia generally commences, and from which it spreads, were also slightly affected. As the temperature did not exceed 104°, nor the respirations 40, nor the pulse 120, it was regarded as a safe, if not a mild case, and Parkes conscientiously believed that it could be left without any treatment to the unassisted processes of nature. On the 6th day, the temperature made a great descent from 104° to 101°, and on the 7th day it had lowered to 98°. The pulse fell to 90, 80, and then to 70 per minute. The respirations only fell from 38 to 35, showing that although the fever and inflammation had subsided, in consequence of the pouring out of exudation into the air cells, and the complete clearance of the blood from the elements of the disease, yet, the lungs were hepatized, and the air cells crowded with the substances cast out from the blood. The inflammation and pneumonia were at an end by this great

critical discharge into the air cells. The exudation was completely outside of the blood vessels, and almost as much exterior to the body as if it had been passed off by the liver, bowels, kidneys or skin. After the 6th day, the expectoration became less viscid, and was free from blood; the cough was looser; the pain in the side subsided of itself on the 5th day. Contemporaneously, the skin, which had been hot and dry, became moist; and finally, profuse sweating occurred. Up to the 6th day, there was $\frac{1}{6}$th albumen in the test-tube; then it gradually disappeared, showing that the congestion of the kidneys had subsided. There were no chlorides in the urine down to the 11th day, when they became perceptible, and by the 21st day from 250 to 330 grains a day were found. The urine, which had been diminished to $\frac{1}{3}$ or $\frac{1}{2}$ the natural quantity, became considerably augmented. There were copious deposits of lithates on the 5th, 6th, 7th and 8th days. The urine pigments which had been increased two or three-fold, were lessened, and the urine finally became lighter in color. The bile acids and the bile pigment (there had been slight jaundice) disappeared from the urine, and the bowels became gently loose. Thus, with the natural crisis, the sudden and rapid defervescence of the inflammation had been accompanied, as it always should be, by decided action of all the eliminating organs—especially of the liver, skin and kidneys. Not only the effete substances caused by the heat of the disease and the great tissue-change, but those which had preceded, or, perhaps, caused it, were carried safely and somewhat rapidly out of the system. The whole body was purified as it would have been after a fit of gout, or an attack of measles, or any other acute blood affection.

But even apparently favorable cases will not always follow this beautiful and ideal course. As is well known, pneumonia, in the majority of cases, attacks only one lower lobe, preferably that of the right lung. And although it rarely invades two lobes simultaneously, yet it sometimes extends in succession to a second and even a third lobe. And, strangely enough, as Dr. Flint says, the inflammation does not always stretch from one lobe to another, but whenever a new part is affected, it is the seat of a new invasion. These wandering cases, which remind one of the migrations of rheumatism, gout or erysipelas, have been variously explained. It is generally held that the effete substances produced

by the high temperature, and the retention of much of the excretions, so poison the blood that other parts of the lung, which had been but slightly injured by the original cause of the disease, not only become more irritated, but finally inflamed. This is very plausible, and, doubtless, in part true; still, the majority of cases first came under observation, not only with a previous lithæmic condition, in which urea and lithates were in excess in the blood, but with the remains of very imperfectly digested food in the primæ viæ, which had not been disposed of before the fever and inflammation sat in, and prevented all further normal digestion of them. Hence, I always prefer in acute diseases to have at least one thorough and early clearance of the whole digestive tract of its partially spoiled contents, and have not been very particular as to the laxative used, although I often give a combination of aloes, colocynth and colchicum. Thus, the small and large bowels are acted upon, and the liver and kidneys are stimulated to increased excretion; for I believe that the first two remedies act upon the liver, while colchicum produces an elimination of the urates and lithates. If it were not for the prejudices against it, a single efficient dose of calomel, as preferred by my distinguished friend, Dr. Leaming, might more often be used for the same purpose, and possibly more efficiently. But the so-called *White's pill* (composed of 1 grain each of calomel, aloes, colchicum and ipecac) is a very safe and effectual remedy. When this preparatory treatment can be used, I think the onset of the attack of pneumonia is much moderated, and the tendency of it to invade new localities is greatly prevented. We will then have nothing but the local inflammation to deal with, for which I think *alkalies*, aided, perhaps, by some arterial sedative, are the best remedies.

I was always strongly inclined to believe in the rheumatic nature and origin of many pneumonias, but am now partially willing to admit the lithæmic and uræmic character of them, as laid down by Murchison for the former, and as proved by the physiological action of the skin in the excretion of urea, for the latter. The greater prevalence of the ureamic diathesis in some cases may, perhaps, account for the frequent involvement of the kidneys, and the occurrence of albuminuria, although I have generally been inclined to attribute them to the same chilling of the

surface, especially of the back and loins, which so often excites pleurisy and pneumonia.

Alkalies not only dissolve fibrin and prevent it from coagulating, but they also correct the acid and lithic condition of the system, which always obtains in all inflammations, and upon which Todd and Murchison place so much stress. They render the expectoration looser and easier, by dissolving the dead epithelium of the air cells and converting it into mucus, and thus relieve the cough more readily and safely than anodynes. They also act upon the skin and kidneys, and thus prepare the system for the final salutary crisis, which should generally take place within 7 to 10 days. They are also refrigerant, and lower the temperature, and are, I think, as useful in pneumonias and pleurisies, especially those of a marked rheumatic nature, as in acute rheumatism. Dr. Alonzo Clark's favorite remedy of potash and lemon-juice is, perhaps, as good as any, and is certainly very pleasant. The addition of a small quantity of aconite is the best arterial sedative in the first stage; for it not only acts powerfully upon the skin, but reduces the pulse. Still, it weakens the heart more than digitalis, which is most useful in the second stage, as it is not only a heart tonic, but acts markedly upon the kidneys and helps to produce elimination by these organs. Colchicum reduces the pulse quite as decidedly as aconite and digitalis, and acts upon the liver, besides causing the excretion of uric acid. With these three remedies, the skin, liver, kidneys and bowels can be kept gently in action, and the fever and inflammation reduced within due bounds.

The alkalies are also indicated in another danger, which only too often occurs, even in seemingly mild cases, and which, I think, Dr. Flint, who has often called attention to it, has not overrated—that is, heart-clot. We can readily see how it may easily happen. In the first place, the fibrin of the blood is in greater excess in pneumonia than in any other acute disease except acute inflammatory rheumatism. Next, the pulmonary artery is primarily involved, and the terminal branches in the lungs are apt to become obstructed, and even occluded. Fibrin commences to coagulate and be deposited in them, and the coagulæ may even reach back to the right side of the heart. Heart-clot is most apt to occur in cases in which an entire lung is inflamed,

and in double pneumonia. In these, says Dr. Flint, the obstruction to the passage of the blood through the lungs, caused by the presence of the exudations in the air cells, involves an over-accumulation of blood, first in the pulmonary artery of the affected lobe or lobes, and finally within the right cavities of the heart. The right ventricle and auricle become enfeebled by the exhaustion caused by the disease, by the now well known degeneration of the heart muscle, produced by the high temperature, and by over-distension. All these causes acting with the great increase of fibrin in the blood, leads to stagnation and coagulation. A dense white clot in the heart sends up or receives down prolongations from the pulmonary artery, and finally passes through the tricuspid orifice into the right auricle, when the heart finally stops. Then, in a case presenting no symptoms which denote imminent danger, a sudden change for the worse takes place. The pulse quickly becomes frequent, feeble and irregular, the respiration is embarrassed, the expression haggard and anxious, and a newly-developed cardiac murmur may be discoverable, while the pneumonia has not extended nor broken out in any new place.

In such cases, carbonate of ammonia is the best tonic alkali, as it is also in all cases of pneumonia occurring in drunkards and those of very feeble constitution. When the heart commences to fail, nux vomica and ammonia are, perhaps, preferable to quinine and alcoholic stimulants, although there is no reason why all of them should not be used. Even ergot may become preferable to digitalis in pressing cases.

Such are some of the points of theory and practice which I have been able to pick out of over thirty years' study and experience. From my 12th year upward, I was thrown, both in Pennsylvania and this city, among homœopaths, and I commenced the study of medicine with the strongest possible bias towards parts of that system, to which almost every person who was dear to me was in favor of, although always somewhat repelled by the gross absurdities of infinitessimal doses; the assumed itch origin of all chronic diseases; and the bigotted rejection by Hahnemann of all other experience except his own. The latter was an impertinence which could only have grown out of excessive conceit, aided by great ignorance of the practical part of his profession;

for Hahnemann was a curiously learned man. I believe that there is only one physician in this city, and perhaps not more than two in the United States, who have studied homœopathy a greater number of years than myself.

When I commenced the study of medicine, Watson's *Practice* was the text-book, and moderate bleeding, in strong persons, aided by $\frac{1}{3}$ of a grain doses tartar emetic, guarded by a few drops laudanum was the treatment recommended for the first stage. Small doses of mercury were relied upon in the second stage, or that of hepatization, in order to aid if possible in the breaking up of the exudation and its resolution and absorption. This method was, of course, successful in the great majority of cases; and although it was unnecessary in many, it was not often very injurious in the hands of reasonably judicious practitioners.

After five years study, I went to Europe in 1841, and after watching the practice of the celebrated Noack at the Homœopathic Hospital at Leipzig, I went to Berlin; but as the Homœopathic Hospital there was soon closed by order of the government on account of the ill success of the treatment of typhoid fever, by bread soup and granules, I was forced to attend the great Charité Hospital only.

By the ordinance of the celebrated Schœnlein, in well marked pneumonia, under whatever circumstances it occurred, moderate bleeding of 6 or 8 to 12 or 16 ounces, once or twice a day, were ordered in the early stages, in proportion to the severity of the case, strength of the patient and nature of the complication. Venæsection was carefully performed even during the intercurrent pneumonias of typhoid fever, rheumatism, phthisis, &c., generally aided by leeches to painful spots. In those astute and experienced hands the dire results which are so often attributed to antiphlogistic treatment did not follow. On the contrary, many patients seemed to withstand both the disease and the treatment very well. A prompt convalescence was not uncommon; no one seemed to be killed; and slow recoveries were often justly attributed to the existence of previous disease. The proportion of deaths did not seem extravagantly high. Digitalis was Schœnlein's favorite internal medicine, always given in infusion, of the strength of 10, 20 or 30 grains of the powder in

6 ounces of water, in divided doses. If the urine, perspiration and other secretions were very acid, the alkalies were given with the digitalis. If rheumatic symptoms were prominent, colchicum was added. If nervousness, restlessness, wakefulness or pain were urgent, opium, aq. lauro-cerasi, hyosciamus and valerian were substituted or added. But generally digitalis was persisted in, in larger or smaller doses, at longer or shorter intervals, according to the urgency of the case. The other remedies were given, withdrawn, or alternated as circumstances seemed to require. Although theoretically acquainted with the great doctrine of crises, I for the first time saw methodical treatment enforced to initiate and sustain them, and noticed a constant watch for them. The treatment was always regulated so as not to supersede or interfere with them. The pulse, skin, urine, expectoration and fæces were always regularly observed; and the slightest hint from any of them was always heeded; so that Schœnlein occasionally said, facetiously, that a conscientious physician had often to be the chief chambermaid, as well as the handmaid of nature. Schœnlein was almost the first to apply auscultation and percussion in North Germany, so that the rational and physical signs were watched with a closeness which I have never seen equalled. No amount of abatement of the mere symptoms was allowed to make him too confident; and no degree of improvement in the physical signs was able to blind him when the expectoration, state of the skin, pulse, breathing, appearance of the urine or fæces did not satisfactorily indicate the existence of a full, free crisis, marked by critical discharges in every direction. Each patient had three tightly covered glass vessels; one for the expectoration, another for urine, and the third for fæces. The exact condition of each could thus always be seen without offense, to the nose at least. Chemical and microscopical examinations of these excretions and of the blood were often made. No pneumonic patient was pronounced convalescent unless the pulse was of normal slowness and softness. The least quickness, and especially hardness, was watched and proceeded against. The expectoration had to be free from all blood, not only to the eye, but the microscope. The urine was expected to become abundant, clear, not very acid, and of the natural amber color. First, it was required that the dark, acid,

saturated urine should become turbid, and deposit, first, flocculent, and then uric acid sediments; becoming clearer and lighter colored, on top, day by day until the turbidity and sediment gradually faded away into normal urine. Then only was all danger regarded as past. Very sudden changes from very dark and thick urine to clear and light were regarded suspiciously. The perspiration was often tested; and it was regulated so as to be neither excessive and exhausting, nor scanty and insufficient. Still, Schœnlein thought more of the kidneys than of the skin, and his favorite remedy, digitalis, was more adapted to cause kidney- than skin-crisis. However favorable the rational signs might be, unless all the physical signs had disappeared, the case was not regarded as terminated. All active measures might be stopped; but a wise watchfulness and careful hygiene were kept up.

Excessive evening exacerbations and insufficient morning remissions were met by prompt venæsections—often of 4, 6 and 8 ounces only—but they were followed up day by day until the disease seemed no longer progressing.

When resolution of the hepatization was slow, alkalies, aided by mercurial ointment, with or without iodide of potassium, were used; and the local application of opium, hyosciamus and digitalis were preferred to blisters, if the pain and soreness were great. Much of this treatment was undoubtedly unnecessary in some, and, perhaps, many cases, but it did not seem dreadfully injurious in any; while it was undoubtedly good in a few, especially when the inflammation was steadily spreading, or was repeatedly making its appearance in new places.

One of Schœnlein's cases occurred in a robust, healthy man, æt. 36, who had fully developed pneumonia, with hepatization of the left lower lobe. Excessive evening exacerbations and too slight morning remissions were met with small bleedings, and rather larger doses of digitalis than usual. On the 7th day, the pulse was soft and 84; the respiration easy and 32; the skin was becoming moist, and the urine began to deposit a flocculent sediment; but there was blood still in the expectoration. This was regarded as an attempt at a crisis; but the probabilities of an extension of the disease from the root to the central portion of the lung was predicted, as all the physical signs and some of

the symptoms persisted unchanged. That night all the critical appearances disappeared; fever, cough, pain, hot and dry skin, and dark acid, acrid and clear urine re-appeared. Hence, the patient was bled ℥viij in the evening, and again the next morning. Then profuse, rank, acrid smelling sweats occurred; the urine again became more abundant and lighter colored, and again deposited a sediment, which, however, was only mucous and flocculent, but not yet composed of the reddish clouds of urates which he preferred to see. Mercurial ointment and oil of digitalis were rubbed upon the chest; and aqua lauro-cerasi and soda were given internally. Complete critical discharges by expectoration, skin and urine soon followed, and full convalescence and rapid recovery were not long delayed.

Schœnlein used to lay great stress upon the importance of not allowing the patient to become chilled about the time of the crisis, when the skin was becoming moist and the pulse beginning to fail in strength and frequency. From such exposures the inflammation would take a new departure, probably from a fresh supply of urea and lactic or lithic acid being thrown into the system from the renewed check of perspiration; and instead of terminating favorably on the 7th or some subsequent day, would run on for 5 or 7 days more. Then, if the same carelessness was indulged in, at the next attempt at crisis, another renewal of the disease would occur. Many of the tedious and fatal cases could be traced to these apparently trivial causes. It is often almost better to check a diarrhœa at the time of the crisis, and depend upon elimination by the skin and kidneys, unless very great care is taken. I am very certain that I have seen relapses occur when the patient rose at night in cold rooms, or went to still colder water-closets.

Next, for several months I watched the expectant treatment of pneumonia under Skoda in the Vienna General Hospital. Skoda's physical examinations were undoubtedly the best which were then made in Germany; but he did not pay as much attention to crises as Schœnlein. His sole treatment consisted in extractum graminis and nitrate of potash; or the equivalent of hay-tea, with a little saltpetre. Still, it was not purely expectant, for he gave from 5- to 15-grain doses of nitrate of potash when the disease was extending, or wandering. He had just aban-

doned the antiphlogistic treatment, with blood-letting and tartar emetic, although he had had 64 cases in females in succession without a death, while he had lost 1 in 8 of males. Under his altered treatment, his loss was about 1 in 15. At the same time I watched Fleischmann's homœopathic treatment in the beautiful Hospital of the Sisters of Charity. He had every advantage over Skoda, in attendance, cleanliness and quiet, yet he lost 1 in 6, as I afterward learned. Still, I saw several or many cases recover in succession; and his success staggered and puzzled me for a long time. I began to suspect at the time that aconite was not a homœopathic remedy, and that the doses were too small to have any alterative effect. I afterwards found that his favorite remedy, phosphorus, was given in such a way that it was converted into phosphoric acid before it reached the patient; and the third dilution, or $\frac{1}{1000}$ of a drop, could scarcely be more energetic than so much lemon-juice. Hence, his recoveries could have been due to nature only. Skoda did not fully carry out his expectant plan till 1846 or '48, and in 1842 I had no means of accurate comparison. In Fleischmann's wards, I saw sudden and seemingly marvelous recoveries, which then seemed the result of treatment, and it was long afterwards that I learned that these cases were like those reported by Parkes and Niemeyer, and were objects for careful observation rather than for treatment. But I saw failures which seemed equally marvelous and unexpected. Balfour reports several—among them that of a stout man, æt. 46, with pain in the chest, slight cough, quick pulse, no expectoration; percussion and auscultation sounds *normal*. Aconite, third dilution; 1 to 10, or $\frac{1}{1000}$ of a drop, 4 times a day. Next day the expectoration rusty; dullness over the lower half of the right lung, before, behind, and at the side. Phosphorus, third dilution, 4 times a day. Failed rapidly on the 3d day; no *post mortem*. Balfour, in 1848, saw Fleischmann lose 3 out of 20; while Skoda lost only 3 out of 45. Yet, Fleischmann's treatment was spread all over the world as the most successful, while Skoda's was thought too hazardous to be relied upon. The one had the elements of the marvelous; the other merely that of the naked truth.

On my return to New York, I watched, under the late Dr. Swett, the results of active tartar emetic treatment, *i. e.*, from 4

to 16 grains per day. Occasionally only ¼ or ½ grain was given every two hours. The mortality was 1 in 7; and it was thought that the favorable influence of this treatment was one of the clearest points in therapeutics.

Subsequently I saw equally good results from 1 or 2 grains in 8 ounces of water, in tablespoonful doses, and the addition of 1- or 2-drop doses of tincture of the root of aconite seemed to render it still more beneficial. Aconite is most useful in the first three days, or while the disease is spreading. As soon as hepatization has occurred, digitalis is to be preferred; and both of these remedies are more safe and useful than veratrum viride. They act upon the skin and kidneys, which the latter does not do; and they are equally powerful as arterial sedatives.

In 1855, I became acquainted with Tessier's homœopathic treatment in the Hospital St. Marguerite, in Paris. He claimed to have lost only 3, but, properly, 5, cases out of 41. The diet was gum and sugar water, from 1 to 3 quarts a day, up to the crisis, when one or two portions of soup were given. The treatment was aconite, bryonia and phosphorus, generally in the 18th dilution. His record appears to be an interesting study of the natural history of pneumonia; but he seems to have picked his cases. Well marked crises and recoveries happened in some of his cases which had had no treatment for 5, 8 or more days. He mistook the evening exacerbations for aggravations by his remedies, and thought that the 18th dilution of bryonia often caused a remarkable decrease of the pulsations—20 to 30 in amount per day. He thought he saw the pulse brought down from 110 or 120 to 60, 56, 44, and, in one case to 36. He saw it fall from 120 to 80 between the evening and morning visits, and from 120 to 60 between two visits, and believed all this to be the effect of infinitesimal doses.

I am now as much opposed to the extreme expectant treatment as I am to the heroic. Skoda's, Dietl's, Bennet's and Todd's so-called expectant treatment are not really such; for 5- to 10-grain doses of nitrate of potash are something; and from 4 to 6 or 8 drachm doses of the solution of acetate or citrate of potash, or ammonia are also. In the hands of those experienced men, such doses given at the right time were often wonderfully efficacious; and they knew well how to wait until the right moment appeared.

In 1842, I, in common with the great majority of physicians, regarded recovery from a severe attack of pneumonia as a triumph of art; I now regard it as mainly a triumph of nature. Still, as before said, I give the alkalies by preference; then the arterial sedatives; and prefer carbonate of ammonia in the weak, delicate, and also in alcohol cases.

ART. II.—*Practical Notes on Salicylic Acid.** By GEO. HALSTED BOYLAND, M. A., M. D., Laureate of the Leipzic Med. Faculty, ex-Surgeon French Army, etc., Baltimore, Md.

My object in publishing these notes is to place myself in a proper position before the profession and the public, as my attention has been directed to the fact that the credit of introducing salicylic acid into American literature and American practice is given to another, namely, Prof. Horsford, of Cambridge.

The first specimens of salicylic acid ever brought to this country were brought here by myself (a present from the hands of the learned Kolbe). The first article on salicylic acid ever printed in this country was written by myself, and appeared in the *Baltimore Gazette*, July 10th, 1874. I refer to its use as a disinfectant. For further literature on the subject, and a resumé of the whole ground, let the following speak. I submit it as evidence:

The correspondence on salicylic acid that took place at a later date (Jan., 1875,) between Kolbe and Horsford (published in the *Boston Med. & Surg. Journal*, March 11th, 1875,) has been reviewed by Dr. Caldwell, in a paper read before the Medical and Surgical Society of Baltimore†. The importance of bringing this new disinfectant more directly to the notice of the profession, the advantages accruing from its use in the practice of medicine, but more especially in that of surgery, already leading the way to its general adoption in the hospitals of the United States, precludes, moreover, any question as to the desirability of placing upon record the more interesting features connected with its history.

*Read in part before the Academy of Medicine of Ohio, Nov. 2d, 1874. See *The Clinic*, vol. vii. p. 219. Also see *The Lancet*, vol. ii., p. 785, 1874.

†*Va. Medical Monthly*, May, 1875, p. 105.

M. Piria first obtained salicylic acid, in 1839, by melting the hydrate of salicyl with caustic potash. It exists, however, already formed in the wintergreen plant. Salicylic acid is formed when the salicylate or benzoate of copper is heated to 220°, Centigrade. Finally, it takes origin by the action of potash melting on salicin, indigo, coumarine; by the action of azotic acid on anthranilic acid. M. Wurtz, Professor of Chemistry at the University of Paris, and member of the Imperial Academy of Medicine of France, tells us in his valuable *Treatise on Organic Chemistry* (page 581) that MM. Kolbe and Lautermann had at that date (1868) produced salicylic acid by synthesis, while directing a current of carbonic acid through the hydrate of phenol, in which they at the same time dissolved sodium.

But the powerful working of salicylic acid as a disinfectant, together with a new method of obtaining it, were both discovered and thoroughly *substantiated* by numerous and oft-repeated experiments, made but twelve months since in the laboratory of Dr. Kolbe, Director of the Chemical Department and Professor of Chemistry at the Royal University at Leipzig; confirmed by others—those able writers and profound clinical teachers, Thiersch and Wunderlich. The acid itself was already known to the scientific world; but its properties as an antizymotic and antiseptic lay hidden in darkness, when Kolbe's talent brought them to light. Until then carbolic acid led the long list of disinfectants.

Indubitably salicylic acid, while disinfecting as completely as carbolic acid, possesses a great advantage over that article, in that, being inodorous itself, it utterly destroys and eradicates all odors and stenches, of whatever nature they may be. Thiersch placed in two test-glasses an equal quantity of human urine, adding to the one a small proportion of dilute salicylic acid; to the other, exactly the same proportion of carbolic acid; whereupon, both became at once free from urate of ammonia. Moreover, at the expiration of ten weeks, during which period they were allowed to stand, neither contained any trace of organic matter—the former being entirely *sans odeur*, the latter emitting an offensive smell of carbolic acid. The Professor, lately performing amputations of the humerus and femur, dressed the stumps in each instance with salicylic acid. The bandages (ac-

cording to Lister's method) were allowed to remain until the fifth day, when, upon removal, there was not the slightest odor perceptible about either the wounds or the dressings, nor had any suppuration set in.

The acid was afterwards applied to cases of carcinoma, with the remarkable success of causing the cancerous secretion and odor to cease within forty-eight hours—three applications only having been made. At a subsequent meeting of the Medical Board, the learned gentleman expressed in warm terms his satisfaction with the investigations made, as well as his intention to introduce salicylic acid into general use at the surgical station.

After a consultation with Professor Wunderlich, I took the dejecta of a patient suffering from catarrhus intestinalis, and treated the same in three different vessels in the following manner.* In the first was left a certain portion of the fæces without chemical addition; into the second was thrown an equal part of the fæcal matter, to which was added 2 drachms of salicylic acid in a solution of 1:25; into the third, *cæteris paribus* carbolic acid. The vessels were then placed in the open air. A microscopical examination at the end of 24 hours showed the first vessel to contain those forms of decomposition designated as leptothrix, and ciliated infusoria; the second and third, on the contrary, were quite devoid of either vegetable or animal parasites.

On the following day the preparations were again examined at the Pathological Institute, under supervision of Professor Wagner, with similar results. Upon the third day, however, the parasites were more numerous than upon the two previous occasions, while the infusions had become still clearer. From the one no odor whatever could be detected; but the other exhaled strongly that of carbolic acid. Another like test was subsequently made by the pharmaceutist of St. Jacob's Hospital, with a solution of salicylic acid of only 1:300. Upon the ninth day, he was still unable to discover any sign of decomposing substances.

The acid is at present being given as an antipyretic in doses of ten grains three times daily—*per orem*. Heated to a temperature of 70°, Celsius, it resolves itself into carbonic and carbolic acids,

*Cholera Asiatica-Prophylaxis ûnd Therapie. Leipzig. Leopold and Baer. Published under the auspices of the Medical Board of Saxony, May, 1874, by Geo. Halsted Boyland, M. D.

from which latter it is ingeniously obtained by Kolbe—although it can also be won from salicin (not to be confounded with the *salicinic* acid, from the same principle and possessing properties analogous to those of chinin), originally from the bark of the salix alba. When thrown in spray form from the atomizer, it does not evaporate like carbolic acid. Prof. Ludwig is of opinion that salicylic acid may be used as a means of preserving anatomical preparations, which experiment is indeed being made in the museum of that distinguished physiologist.

The first specimens of crude salicylic acid were brought to the United States in June last, and presented to that Nestor of American surgery, Prof. Nathan R. Smith, of Maryland; also to the Academy of Medicine of Ohio—an account of the investigations made by that body may be found in the report of Dr. Geo. B. Orr, of Cincinnati, Professor of Surgery.*

But, objects the chemist, salicylic acid in the crude state is not so readily soluble as carbolic acid! The answer is: Salicylic acid does, indeed, require a few minutes longer, and perhaps the facility is not so rapid; but even this trifling delay may be overcome by the addition of one part of the phosphate of soda to one hundred of salicylic acid. This process renders the solution perfect forthwith, and does not in any manner influence its power.

It remains to be added that any habile chemist may easily manufacture large quantities of salicylic acid at relatively small expense, which will be reduced still lower as soon as the acid is generally adopted; that day is not very far distant, as the favor with which it has everywhere met clearly shows.

Salicylic acid in the crude state is a light brown, or, rather, salmon colored, powder, in which form it may be used also. In conclusion, let me state that the result of further investigations with the acid, as regards albumen and plants, will be made known in another paper.

ART. III.—*Migraine—Its Treatment with Guarana.* By HUME FIELD, M. D., San Marino, Va.

Among the various neuroses, there is one form of neuralgia which the medical practitioner is frequently called upon to treat

**The Clinic,* loc. cit.

denominated *migraine*. While our science has made rapid strides and wonderful improvement in its various branches, especially in the treatment of this class of diseases, still suffering humanity has yet to herald the good news and hail with joy the happy day when our profession shall have reached the acme of perfection, in giving relief in every case of this painful affection. It has been our sad experience, and doubtless, we fear, the same of some of our esteemed colleagues in the treatment of this exceedingly painful and distressing malady, that our skill has often been baffled, and our best efforts to relieve the tortured patient defeated; so that, when at our wit's end, we have felt like calling upon "the mountains to cover us, and the rocks to fall on us." Eminent authors, whose able and learned essays on this subject we have consulted, differ widely as to the pathology, cause and treatment of migraine. Some locate the *fons et origo mali* in the cerebro-spinal system, as in one division of the trigeminus, or some branch of the pneumogastric, and others in the organic nervous system. But we incline to the belief that the cause may be located in either one or both of these great systems of nerves. The cause, we think, may be attributable to some abnormal condition or even actual state of disease, existing in some one or more of the nervous centres of either, one or both, the cerebral or sympathetic system; and not always occurring as the result of derangement of some of the digestive organs, as many contend, when accompanied with such symptoms as anorexia, nausea, &c., and only to be relieved by the administration of some prostrating and exhausting purgative to remove this imaginary peccant matter. *Per contra*, symptoms, we are sure, are the effect or result, and not the cause of the disease.

But it is more in regard to the treatment that we desire to direct the attention of the profession, and particularly would we call attention to *guarana* as a remedial agent. Our experience with this medicine has been limited, but sufficiently extensive to warrant us in recommending it as a simple and harmless remedy, yet effective and complete, in many cases of sick headache. It is true we can relieve the paroxysm of pain, partial or complete, which is often agonizing, and lasts from six to twelve, and even twenty-four hours without treatment, by the use of the various narcotics, as aconite, belladonna, cannabis Indica, morphia,

quinia, chloroform, strychnia, chloral, potassium bromide, &c.—many of these being administered hypodermically. But these are active and powerful drugs, some of them intensely poisonous, and are not administered without risk. They are, besides, generally followed, to a greater or less extent, by unpleasant, and even sometimes injurious and fatal consequences; as, for instance, the sad, baneful and soul-destroying habit of "opium-eating," which every candid physician must admit with sorrow and regret, is on the increase, more particularly among the higher, educated and refined classes of society, reared in the lap of luxury—*res magni momenti vel ponderis.*

Then, we think, after or before resorting to the aforesaid remedies, this simple one—the *Paullinia powder*—is well worthy of a trial, and if it proves effective in the experience of other practitioners as it has done in ours, we will have accomplished a good—one which will doubtless prove an inestimable boon to the nervous invalid.

On the occurrence of the prodromic symptoms, we prescribe for the patient, if an adult, thirty grains of guarana, mixed in a little sweetened water, to be taken at once, rest and quiet in bed. This is generally succeeded by good, sound sleep, and on awaking the patient expresses himself as feeling quite well—sick stomach, &c., all having disappeared. When the paroxysm is fully established, we advise the powder to be administered and repeated every half or three-quarters of an hour, until three or four doses are taken, which is followed by partial or complete relief from pain. Refreshing sleep occurs, and there is temporary restoration to health. Especially will this be the result in treating the young, from seven to fifteen years of age; although we must confess that some of our experiments with this medicine, like those with other remedies, have utterly failed of success. We do not, therefore, herald guarana to the profession as a specific in every case of migraine.

Thirty grains of guarana, taken at 1 o'clock A. M., has relieved insomnia and a dull pain in the occipital region of the head in our own case on two different and recent occasions. We will record our experience with the agent in only two cases, one an inveterate and very obstinate case:

I. Mrs. F., a delicate lady, æt. 42, the mother of six children,

has suffered at times with dysmenorrhœa, before and during her married life. She has been troubled with migraine for the last fifteen years; the paroxysms of pain are usually located in the right, sometimes in the left temple; they are excruciating, and continue from six to twenty-four hours. After treating the case for several years, in the intervals with different tonics, antiperiodics, &c. (never tried electricity in this one), and during the paroxysms of pain, with all the anodynes, narcotics, &c., usually prescribed in similar cases, with but partial relief and unsatisfactory results; and the attacks of late years having become more frequent, returning as often as every two or three weeks, while the system had gradually grown less susceptible to the action of anodynes—hence requiring much larger doses—we determined to try guarana. On visiting our patient fall before the last, she remarked "that all our remedies had failed, and believed there was more virtue in a strong cup of tea or coffee, united with rest in the recumbent posture, than all of them combined." We prescribed the following:

℞. Pulv. guarana ..... ℥ij
Pulv. saccha. alb ..... ℥ij
Aqua font ..... f ℥ij

M. S. Agitate well, and take half an ounce every half hour, unless relief is sooner afforded.

Two doses were taken, the pain was relieved, and comfortable sleep induced. This patient has resorted to the same remedy on the occurrence of other paroxysms of pain, and has secured relief, except in one instance, when the relief was only partial. Tonics have been prescribed in the intervals, which have been lengthened to six and eight weeks, and her general health has much improved, no doubt in a great measure due to the discontinuance of so many deleterious and noxious drugs.

II. Mrs. F., an invalid lady, æt. 29, and the mother of three children, enjoys all the comforts of a home which ample means can afford; suffers with indigestion, anæmia, and occasional attacks of sick headache, oftener in the left temple and cheek. Was visiting and treating her for catarrhal fever, from which she was convalescing, when, on our morning visit, Feb. 22d, 1875, we found her suffering with pain in the left temple and cheek. She had taken quinine without relief, and now desired morphine —although this medicine invariably aggravated her dyspepsia, and always caused nausea and vomiting. We administered *instanter* thirty grains of guarana powder in sweetened water; directed the room to be kept dark and quiet; assured her that we would remain until after dinner, and if the medicine failed to afford relief, would give sulphate of morphia subcutaneously. We

were gratified that our patient was soon embraced in the arms of Morpheus, enjoying a sweet nap, and awoke in an hour or two much refreshed, free from pain, and ready to partake of her dainty and tempting dinner with some relish.

The therapeutic action of guarana, we think, is that of a nervous stimulant and anodyne, and we trust it may prove as effective as a remedy, in the hands of others, as it has done in ours—*quæ aliquibus si non omnibus, prosint.*

ART. IV.—*New Remedies—Salicylic Acid* and Damiana.* By J. J. CALDWELL, M. D., Baltimore, Md. (Read before the Medical and Surgical Society of Baltimore, March 18, 1875.)

Salicylic Acid.—In presenting a report on this agent, lately introduced into therapeutics, I shall content myself by reproducing, without comment, the remarks of Prof. E. N. Horsford, of Cambridge, published in the *Boston Medical and Surgical Journal* (January 28, and March 11, 1875).

"I inclose, with a request for publication, an extract from a letter just received from Professor Schwartz, of the University of Gratz, giving some account of an important communication made to the recent German Scientific Congress, at Breslau.

'In the chemical section, the most important thing was the exhibition of the salicylic acid, now produced in large quantities by the process of Kolbe. It is made from $C_{12}H_6O_2$ and NaO, HO (phenol sodium), into which is conducted dry carbonic acid at a temperature of 170° C. There is formed salicylate of soda, which decomposed by hydrochloric acid precipitates the salicylic acid. This is the best disinfecting agent known; it is without odor, tasteless, not poisonous, and even in small quantities, absolutely preventing putrefaction. Meat immersed in a solution of salicylic acid, in an open vessel, remained perfectly sweet for weeks. It prevents milk from coagulation. Fruits do not become mouldy; and wounds heal without festering. In the case of a patient whose leg was amputated, the wound was

[*The fact of the admission of the part of this paper on *Salicylic Acid* under the head of *Original Communications* explains itself in the first paragraph, where full credit is given. The entire paper, as published, is a portion of a *Report* on some New Remedies. That part of it on *Damiana* records the original observations of Dr. Caldwell.—ED.]

sprinkled with a little powdered salicylic acid, and bandaged for six days without being touched. It was then found to be healed over without the slightest formation of pus.

'It is easy to see what enormous significance attaches to this discovery. The transportation of meat, the preservation of bodies, of anatomical and zoölogical preparations, of fish, mollusca, milk, beer, wine, etc., will be greatly promoted. It must be remembered that salicylic acid is perhaps twice as effective as carbolic acid, and that it is wanting in the poisonous and unpleasant qualities which characterize the carbolic acid. Dr. Fr. v. Heyden has erected, at the suggestion of Professor Kolbe, a manufactory of salicylic acid at Dresden, where one may obtain the acid.'

[It may be well to add that salicylic acid is a constituent of the oil of wintergreen (the checker-berry, *Gaultheria procumbens*, of New England). Its production from carbolic acid (phenol) on a commercial scale, and so from "dead oil," a familiar product of the distillation of coal tar, is one of the triumphs of modern chemistry. It promises so much in practical surgery, in securing healing by first intention, in the prevention of pyæmia, and in the arrest of the growth of all forms of microscopic, animal and vegetable life that characterize fermentation and putrefaction, that opportunity for experiment cannot be too soon opened for all. The article can be imported in small quantities through the mail, and in larger quantities through any of the leading druggists.—E. N. H.]"

"We have received from Professor Horsford the following abstract of two papers just received from Prof. Kolbe, containing the results of experiments made at Leipsic with salicylic acid.

'In the lying-in hospital of Leipsic, salicylic acid has been employed to the exclusion of carbolic acid since July last, for disinfection of the hands, in vaginal douching, application to ulcera-puerperalia, etc., in solution in water of one part in three hundred, to one part in nine hundred, or as a powder mixed with starch in proportion of one part in five. This use of salicylic acid has thus far been attended with such successful results that it is recommended in the strongest terms for use in obstetric practice by the authorities of the hospital.

Professor Kolbe suggests that physicians, and especially hos-

pital physicians, should study the action of salicylic acid as a medicine—whether, and in what quantity of larger or lesser doses, it will influence scarlet fever, diphtheria, eruptions, syphilis, dysentery, typhus, cholera, etc.; also, whether it may be used against pyæmia and the bites of dogs; also, whether it may not be used advantageously among horses, cattle and sheep to prevent glanders, foot-rot, mortification, etc.

Kolbe, to prove the innocuousness of salicylic acid, took for several consecutive days half a gramme (seven and a half grains) daily in water, one part to one thousand, without the slightest observable unpleasant effect. After an interval of eight days, he took for five consecutive days one gramme (fifteen grains) daily, and then for two days one and a half grammes (twenty-three grains) in alcohol each day. The digestion was perfectly normal; no trace of salicylic acid could be found in the urine or fæces. (The test is perchloride of iron, which gives an intense violet color). At no time was there the slightest discomfort.

The experiment was repeated by Professor Kolbe and eight of his students, all at the same time. Each took on the first day one gramme, and on the second day one and a quarter grammes, of salicylic acid; not one of them was able to observe the slightest derangement of any organ.

The acid in diluted solution is employed to wash the feet to prevent the offensiveness arising from butyric, valerianic, and other related acids in sweat. It is also used as a constituent in tooth-powder, and for a liquor to wash the mouth.

Professor Wunderlich, of the University Hospital, Leipsic, recommends a medicinal preparation of salicylic acid for internal use, consisting of

Acidi salicylici	1 gramme.
Olei amygdalæ dulcis	20 grammes,
Gummi Arabici	10 "
Syrupi amygdalæ	25 "
Aqua florum aurantii	45 "

Kolbe proved by experiment in the bath that the salicylic acid is very little, if at all, absorbed through the skin.

C. Neubauer (a pupil of Prof. Kolbe) has experimented with salicylic acid to determine the quantity necessary to arrest fermentation in solutions of sugar and new wine. He found that

one gramme of salicylic acid is adequate to make 0.98 gramme of press yeast (weighed dry) in ten litres (about ten quarts) of new wine incapable of fermentation.

Kolbe found that $\frac{1}{20000}$ of salicylic acid would keep river or pond water in casks perfectly fresh (the experiments continued four weeks in a warm room), where without the acid the water acquired unpleasant taste. This quality will make salicylic acid serviceable in preserving water on long sea voyages."

Damiana.—I now desire to invite your attention to a plant—new to the medical world—called in the Indian tongue "Damiana" (a powerful aphrodisiac), and found on the western borders of Mexico.

In giving the history of this wonderful and beautiful little plant, I regret to say that I cannot present, as yet, its technical name or true classification; but I am very well satisfied, from quite an extended experience with the tincture and extract of this plant, of its powerful influence over the urino-genital organs of both sexes, as in moderate doses it increases the flow of urine as well as the sexual appetite, as my cases reported in this article will show. But the following extracts from letters from one of our consuls in Mexico will give as much of its history as I have been able thus far to obtain.

"This plant does not seem to flourish among the mountains or very far from the sea, and derives its aromatic properties from a rocky soil, which, during some months of the year, presents a very uninviting appearance to the florist or botanist; but after the annual rain commences (about July), then that which was so forbidding before bursts, another Cinderilla, into a temporary but enchanted life. Among the glowing colors and delicious odors which charm the traveller, he discovers the dark, green leaves and smallest white blossoms of the damiana, modestly claiming a share of his divided and aroused attention; and as you 'pause and on the stranger gaze,' it is observed that a species of gum, of a peculiar fragrance, seems to cover the stems. This is the time when, in accordance with the experience of the people of the country, it ought to be picked, to possess its best and full virtue. At that period it is easier to collect an aroba (25 pounds) than it is now (January) to get a pound.

"I wrote you of the death of Simon Anclos, who had been in the habit of taking his damiana tea for as long as he could remember, and common report set him down for over 100 years old; but an old man (eighty-five) called Surayo, who had long known Anclos, says that he (Anclos) was *ya un anciana* when he (Surayo) was yet a boy, and was then old enough to be his grandfather. There are a great many such in this country. I do not mean to say or intimate that damiana does it all, but only this fact, that very many of those old stagers do sire children, as old Anclos did, up to the last—some of them having two or three dozen legitimate, without counting the outsiders. It is the climate, perhaps, but I think it almost too much to put it all down to climate.

You will observe that what I send you is only the new sprouts and leaves of the plant. Some people gather it with large weights of wood, but that is only a dead investment. It is said that the root possesses the same virtues as the leaf. There are two classes of damiana. The best bears a white blossom, and has a small leaf; the other has a yellow blossom and a large leaf, and is much more easily gathered, but is every way inferior in aroma and strength."

Case I.—Mr. H., of Carroll county, Md., aged 70, called, June, 1874, to be treated for impotency. As he had just married his fourth wife he manifested great anxiety concerning his weakened powers. I advised him to try the benefit of Faradic current through the genito-sacral plexus. His occupation being such as to require almost constant travel, he was unable to follow my orders in this particular. I then placed him upon the strong tincture of damiana, in tablespoonful doses three or four times a day, which resulted in a marked improvement in his procreative powers, so that after a few weeks continued use of the remedy he reported himself "well able to enjoy sexual congress, of course observing a moderation due in a man of his age."

Case II.—In October, 1874, Mr. M., of Baltimore, informed me that his wife, after a severe illness, with mental trouble, lost all her sexual appetite, her age being 40. Her health being well re-established, I resorted to this nervine tonic with very happy results. Her husband, being robust and vigorous, as a matter of experiment, used the same remedy in tablespoonful doses twice a day, resulting in excessive and almost ungovernable sexual desire; and this has proven true in several other cases of vigorous constitution upon which I have experimented.

CASE III.—Col. L., of Baltimore, aged 55, called December, 1874, suffering from general debility of the urino-genital organs, attributed to the excessive use of alcohol. He, too, was placed upon the tincture of damiana, and followed it up faithfully for a month or six weeks, with the very best results, greatly increasing the secretion of his urine, besides improving his sexual ability.

CASE IV.—Mr. K. has been under my care for over a year, suffering from stricture of the urethra, with extreme irritation of the bladder (sympathetic). The stricture was treated by galvanic electrolysis successfully, by placing an elastic insulated steel-pointed catheter, attached to the negative pole of the galvanic battery, applying the same with gentle pressure, while the positive pole, a zinc plate four inches square, covered with a napkin saturated with salt water, was placed over the sacral spine—these applications made on alternate days, with fifteen minutes application each. After the stricture had been absorbed and removed by this mode of treatment, the irritability of the parts yielded to the use of the tincture of damiana, in moderate doses twice a day.

The foregoing is a report of a few typical cases that have come under my observation, and are given as an introduction of this new remedy, and for what they are worth, solely with the view of calling the attention of the profession to the virtues of this pretty little plant, culled from the prolific soil of the wilds of Old Mexico, a field no doubt teeming with a wealth of unknown medicines waiting for the progress of our noble and searching science to penetrate and grasp her hidden treasures.

I would recommend the tincture and fluid ext. of damiana. I prefer the fluid extract, as it is less bulky, more positive in its effects, and more reliable and uniform, as proven in cases now under my care. Indeed, this remedy seems to have a specific effect upon all of the organs of the pelvis, giving increased tone and activity to all of the secretions in that vicinity.

ART. V.—*Case of Aphasia, with Remarks.* By W. H. TAYLOR, M. D., Washington, D. C.

P. B., æt. 63, occupation merchant, full habit, hearty eater, and free liver generally. For two years has been suffering very much from asthma; had to give up business in consequence; in fact, all fatiguing exercise had to be abandoned, for the least degree of exertion, either of body or mind, would bring on an

attack of difficult breathing. Any smoke or foul smell would have the same effect.

October 11th, 1874.—Was taken ill during the morning between 11 and 12 o'clock. His wife found him in the parlor sitting at a table, and unable to stand up or to sit up without supporting himself by the table. There was confusion of ideas, but no difficulty of speech at this time; his face was flushed, and extremities cold. An hour or more elapsed before he could move with assistance to a sofa a few feet distant, where he remained until between 5 and 6 P. M., when he got up and walked up stairs to his room, and with little help undressed and got in bed. There was now (6 P. M.) almost complete loss of speech; he could not make known his wants, except imperfectly by signs. "Yes" and "No" were the only words he could utter; further than that it was all unintelligible. He could not write, though he made repeated attempts. Slept quietly all night of 11th, and slept most of the day and night of the 12th.

I was telegraphed on the 12th, and saw the patient on the 13th between 8 and 9 A. M. His condition was pretty much as it had been since the attack on the 11th; pulse 80 to 82 per minute, and quite natural in quality; temperature, judging by the hand, natural; face flushed a little at times; bowels inclined to constipation; no appetite; tongue covered with broad, white fur; weak and nervous; breath very offensive; exhalation from skin also offensive; could use no words except "Yes" and "No," and he used these indifferently, saying *No* when he meant yes, and *Yes* when he intended no.

On the evening of the 13th I tried to find out if he could write. He wrote some letters quite plainly, with some figures, but there was no connection between them. I noticed at this time that his sight was bad; I judged, from the way in which he attempted to write, that there was double vision. There was not the slightest paralysis in this case; there was only a general weakened condition of the whole muscular system. With the exception of memory, the other faculties of the mind were not very much clouded; but the memory of words and their application to his wants, and memory of dates and figures—in fact, general impairment of memory—was very marked.

This condition lasted as long as I was with him—until the 17th. I did not see him again until *November 4th*, when I found him much improved in speech and strength, though the memory was still quite defective. His condition, I learned from his wife, was not materially changed until the day before my visit (Nov. 3d), when he commenced to talk and seemed to remember things much better.

November 7th.—Had his first attack of asthma since attack of aphasia. For about one month he had been free from asthmatic attacks; but as soon as the aphasic condition improved or passed off the asthmatic symptoms returned.

I have seen this patient daily since November 4th, and he has improved rapidly. He can now write quite a long letter without mistakes, and can carry on an ordinary conversation with very little difficulty; but he can not do much or anything with figures—that is, in adding up or writing a number of figures he will be likely to transpose them or make mistakes as to quantities.

There are two or three points of interest in this case: *First*, the brain lesion; *second*, the connection with the previous history of asthma; *third*, the effect of the brain difficulty upon the asthmatic attacks.

As to the brain lesion, I think there was occlusion by thrombus of one or more of the small cerebral arteries. This opinion does not meet with the approval of some of the physicians to whom I have described the case; they seem rather to incline to the opinion that there was rupture of a small artery.

Lidell, of New York, (in an article in the *Amer. Jour. Med. Sci.*, January, 1873,) says, in speaking of thrombosis of the systemic arteries: "But little attention appears to have been paid to this subject by English and American physicians." But he goes on to show, from a number of cases reported by Billroth, Dupuytren, Trousseau and others, that thrombosis of the peripheral arteries very often does occur. The same circumstances that would predispose to rupture would also predispose to thrombosis.

Now the action of this patient's heart was, and had been for a long time, weak; so that in speaking of the heart-beat, on my first visit after this attack, I called it natural—that is, natural to him. I had, some time back, suspected fatty degeneration of the heart and an atheromatous condition of the arteries. Then in this case there was imperfect oxidation of blood, from asthma and the habitual use of alcoholic stimulants; all of which conditions tended to cause stagnation of the blood in the remote vessels, and predispose to its coagulation.

Lidell, in another very interesting article on "Thrombosis of the Cerebral Arteries" (*Amer. Jour. Med. Sci*, April, 1873), says: "It is probable that thrombosis attacks the minute arte-

ries of the brain in aged and prematurely old persons much more frequently than is generally supposed."

Granting the theory correct, that the portion of the brain governing speech is the left third convolution of the cerebrum, I would expect in this case to find one of the left cerebral arteries occluded; and I believe it has actually been demonstrated that the arteries of the left side of the braln are more liable to rupture or occlusion than the arteries of the right.

I am further inclined to the belief that this was a case of thrombosis of a cerebral artery, from the fact that the seizure was not sudden, violent and alarming, as is generally the case in rupture of an artery within the brain. The patient was taken sick about 11 A. M.; he felt exceedingly weak and alarmed; there was confusion of ideas; but the decided symptom of brain lesion—loss of speech—was not observed until about 6 P. M., and then it was not so marked or complete as it was the next morning.

In a few days, as the collateral circulation began to be established, the symptoms became more favorable, and in one month, when the circulation was fully established, either by absorption of the clot, or through the collateral arteries becoming enlarged, the power of speech was regained, or at least restored sufficiently to enable him to speak a sentence connectedly.

Now, as to this attack being immediately preceded or accompanied by an attack of asthma, I could not ascertain that this was the case. As I have stated, the attacks of asthma were entirely suspended during the aphasic condition, and returned as soon as the aphasia was relieved.

Was the portion of brain affected in this attack the same as that which, being affected through reflex irritation, or otherwise, induced an asthmatic attack? It seems to me more likely the disturbed condition of the brain, and general prostration induced thereby, reduced the nervous irritability to such an extent that the irritation which ordinarily produced an attack of asthma was not sufficient to do so whilst this peculiar condition which occasioned the aphasia existed.

In the treatment of this case I first stopped all alcoholic stimulants, and substituted therefor Liebig's extract of beef; allowed milk and light nourishing diet generally. I gave calo-

mel and jalap (ten grains of each) to clear the bowels, and blistered the nape of the neck. To equalize the circulation in the nervous centres, and reduce the coagulability of the blood, I gave iodide of potassium in ten grain doses three times a day, and bromide of potassium in like doses twice daily. This treatment was kept up for a week, when the doses were reduced in quantity and frequency, but were continued for a month. The iodide was then discontinued, but the bromide was continued irregularly for two weeks longer, making in all six weeks treatment, when all medicines were discontinued.

ART. VI.—*A New Method of Operating for Total Symblepharon by means of the Transplantation of a Rabbit's Conjunctiva into the Newly Separated Cul-de-Sac.* By GEORGE REULING, M. D., Surgeon in Charge Maryland Eye and Ear Institute, Baltimore.

It is well known that all operations so far recommended for the successful removal of extensive adhesions between the eyeball and the inner surface of the lids have proven almost fruitless, especially when the base of such adhesions involved the greater portion or the whole of the eyelid. In cases of only slight adhesions (bridges) indeed, the normal movements of the eyeball may be re-established by a mere dissection of the connecting band. When, however, the eyeball is extensively adherent, all efforts to enable it to regain its freedom of motion have always been rendered futile by the reunion of the separated parts. Nor will the conjunctiva tolerate foreign substances calculated to prevent reunion. The ingenious experiments with shields of glass, horn or ivory, interposed between lid and eyeball, were therefore never productive of beneficial results. The only operation for symblepharon (with a moderately broad base) which, so far, has successfully been performed, is reported by Mr. Teale in the R. L. O. H. Reports, vol. —, p. 253. This consists in the transplantation of portions of the surrounding conjunctiva, after all connections between ball and lid have been severed.

But how shall we operate in a case where there is no eligible conjunctiva to be had, on account of complete adhesion between

both eyelids and ball? This condition is not infrequent, being often produced in consequence of a burn by molten lead or quicklime, or after long existing and injudiciously treated conjunctivitis granulosa with pannus.

Having met with a case of this kind, and being anxious of doing my patient as much service as possible, I asked his consent to try a new operation, viz: the transplantation into his eye of a rabbit's conjunctiva.

The particulars of the case are as follows:

Mr. H. D., a gentleman 62 years old, afflicted in both eyes with a most protracted granular conjunctivitis with pannus. He was suffering thus for at least fifteen years, during which time many exacerbations had taken place, and renewed crops of granulations, together with severe attacks of kerato-iritis had occurred.

It appeared that previous to placing himself under my treatment, most severe cauterizations had been employed, and many granulations had been excised by means of the scissors. In consequence of this proceeding the wounded and greatly reduced conjunctiva united with the ulcerated surface of the cornea, thus forming, in course of time, a symblepharon of small extent, which, after oft-repeated operative interference, and especially after the gradual atrophy of the granulated conjunctiva, became so tightly adherent to the globe that finally a total symblepharon cum cornea resulted.

In order to obtain total separation between lower lid and eyeball, I dissected the lid by making my incisions parallel to the surface of the ball. By this means complete mobility of the lower lid was produced, and a cul-de-sac of normal dimensions established. By this mode of procedure I produced, on the lower half of the ball, as well as on the whole extent of the lower lid, a raw surface deprived of all conjunctiva. Into the defect I had thus constituted I sewed the entire half of the conjunctiva of a living rabbit in such a manner, with twelve sutures, that the inner surface covered the whole defect; when, therefore, the lower lid was readjusted in its natural position, all danger of subsequent reunion between eyeball and lid was done away with.

The operation was not immediately followed by anything worthy of particular mention. The application of a pressure bandage was omitted, in order to guard against a new crop of granulations. For the same reason I did not think it advisable to make use of warm fomentations, as recommended by Prof. Nussbaum, of Munich, in the operation of skin-grafting. The only topical application I allowed consisted in pieces of linen

dipped into tepid water, and frequently changed; I also instilled a drop of a solution of atropine every two hours, so as to prevent possible iritic attacks. Twelve hours after the operation no sign of union was visible, the new conjunctiva being perfectly white and bloodless. Neither sloughing, however, nor any perceptible loss of epithelium had taken place.

Twenty-four hours subsequent to the operation the rabbit's conjunctiva evinced some slight injection and swelling, as was shown by the thread next to the caruncle, all the other portion being as white and unchanged as before. A very small part protruded over the margin of the lid and showed signs of decay. It was therefore cut off down to the edge of the lid.

Thirty-six hours after the operation.—Injection around almost every thread (stitch), and a reddish hue throughout the new conjunctiva.

Forty-eight hours after the operation.—The conjunctiva entirely injected with blood and tightly adherent to the edges of the wound. After the removal of all the sutures I was agreeably surprised to find that a new conjunctival sac had been established.

The above report is written eight days subsequent to the operation. The cornea, which had been excessively opaque, is gradually clearing, so that fingers which could be distinguished at only half a foot, are now counted at the distance of four feet. The operation has so far, therefore, proven successful; and it is my intention in a few days to separate the upper lid and to line it as well with conjunctiva.

In one of the subsequent issues of the *Monthly* I shall report the result of the new operation.

Clinical Reports.

Case of Epithelial Cancer of the Bladder. E. VAN KENREN, M. D., Hammondsport, N. Y.

Mr. C. aged 47 years, full habit, weight 200 pounds, height 5 feet 8 inches, of sanguino-nervous temperament; occupation, supervising a large sparkling wine establishment (of which he was chief owner) for last fifteen years; one of four children, two of which, a grown up brother and sister, died of consumption; a good liver, yet very active business man; for last twenty-five years he has been subject to attacks of colic, and to catarrhal affections that at times extended to the bronchi.

December, 1873.—He had an attack of colic, from the effects of which he did not recover fully. A vague or undefined uneasiness remained in the hypogastric region, and a nervous irritability lingered for some time after he was able to resume his accustomed duties.

Some time in April, 1874, he began to observe unusual calls to evacuate his bladder—having to get up several times every night—attended with pain in voiding, especially as the last drops were forced out of the bladder. About the latter part of May medical aid was sought, when a sound introduced into the bladder, and a finger into the rectum, discovered no prostatic enlargement, nor stone in the bladder. Quiet, rest, diluents, alkalies, and a saline cathartic were advised, with the hope that matters would soon mend. Immediately after the introduction of the sound a considerable quantity of blood passed with his urine. No unusual irritation was caused by the sound as the occasion for this discharge of blood. The instructions given were pursued in the main, but no improvement occurred in the reduction in the frequency of calls to urinate, nor in the pain attending; besides, the discharge of blood continued, and in increasing quantity. General health was good; no feverishness, digestion perfect, no pain except at the time of urinating, unless it might be a feeling of soreness on firm pressure immediately above the symphysis pubis.

About the 1st of June an uneasy, or rather painful, desire to evacuate the *bowels* was added to the symptoms. Remedies for irritation of the bladder and prostate were used, but the leading features of the case remained unchanged, namely: frequent calls to urinate, attended with pain, and tenesmus and large quantities of blood, either clotted or mixed with the urine.

While in this condition he consulted a medical gentleman in New York (city), who diagnosed the case as being one with *three strictures, and prostatic overgrowth* which was disposed to assume the shape of a bar; and advised introduction of sounds of increasing sizes, citrate of potash, avoidance of stimulants in food, drink, &c. These instructions were followed for a few weeks—rather fitfully, however—and then neglected. It was not believed strictures could exist while sounds of large size could be passed readily by the patient even. But fomentations with hot

water were resorted to for the relief of pains about the hips and genitals, starch injections *per rectum*. Saline laxatives, buchu, citrate of potash or liquor potassæ, gum water, and other diluents, cupping loins and hips—these and like remedies were resorted to on the expectant plan, while at times morphine was demanded to procure rest. The tenesmus, frequent calls to urinate, and blood would seem to yield for a few days, and then without known cause become worse. Bethesda water was taken *ad libitum*.

Thus matters progressed—now apparently better, and then much aggravated—till the month of September last, when another medical gentleman of New York (city) was consulted. He diagnosed no strictures, but *tumor*, and thickening of the posterior wall of the fundus of the bladder. He could not name the tumor, but regarded it "suspicious in character," and recommended the use of *green tincture of iron* in 10-drop doses, increasing to 15, and 10 drops extract of ergot, three times daily, continuing citrate of potash, or other alkali, avoidance of stimulants, and use of plain diet, &c. This was done for nearly six weeks, but no improvement came in the case.

The season now began to be cold and wet, as October and November are with us in Central New York, and the duties of our patient called, as he thought, for his personal attention to the purchase of grapes. Hence, contrary to all advice on the subject, he exposed himself; and as a result, he had spells of retention of urine from accumulation of clotted blood, and induced cystitis. His general health had by this time suffered; he had lost in flesh, spirits, and will-power; was irritable, and rested very poorly. Through the day he could divert thought and attention from his ailment; but at night he was severely troubled with pains down the inside of his thighs, in the iliac regions, in the perineum and loins. For these and insomnia he used the induced current of electricity with the happiest effects, which was continued for the further purpose of overcoming the atony of the muscles connected with the act of urination, and for its general tonic effect. Injections of borax, glycerine, and water were used, without and with the addition of sulphate of morphia. These were resorted to only for present relief. Quinine had found a place in the treatment, from time to time.

By December his general health was greatly impaired; appetite and digestion were poor. There had not been, nor was there at this time, any tumefaction of the external parts, no glandular swellings; but to live in reasonable comfort, he required morphia daily; buchu and citrate of potash were discontinued. The discharge of urine had increased to double normal quantity; albumen was marked, though not in large quantity in the urine; there had been stringy clots, filling the catheter at times; now there were shreds of fibrin holding mucus and blood, partially decayed, and a fetor came with each discharge from the bladder. Finally there was nausea and vomiting. The continuous current of electricity applied to the cervical sympathetic and pneumogastric nerves effected all that could have been desired in relieving nausea and vomiting for the time, but did not prevent the recurrence of those disagreeable sensations every day or two.

Fully assured in his own mind that something terrible was going on within him, he was yet unwilling to be told that he could not be cured; and while kept up on opiates, and going through with the routine injections, washing and rubbings, he was unwilling to abandon further trial of means. Hence, by great effort, he visited New York city) once more, about the 20th of December last; had a consultation of able surgeons, who etherized him, introduced a lithotrite, diagnosed ulceration of the bladder and some prostatic enlargement, and noticed uræmic symptoms. Gave treatment for bettering general condition, and that of the bladder, with a view of performing cystotomy; but he sank of uræmia, and died early in January last.

Post mortem revealed extensive ulceration of the bladder; a portion of mucous membrane and morbid growth were found floating in the bladder, held to it by a mere fibre, so to speak; the kidneys were congested and chronically inflamed—one markedly so. The microscopic examination was reported as revealing the case to be one of *cancer*, as I had long supposed it was. How long it had existed before he complained of being called to get up at nights to urinate, no one knows; but that it existed several years prior may be conjectured from the fact that his pulse was from 90 to 100 for five or six years, and that no amount of fasting, or other effort compatible with the pursuit of ordinary business, would bring the frequency below 90.

For two months before his death the patient passed as much as six or seven pints of urine daily; albumen was found in it, but the altered condition of the urine, from blood and ulceration, rendered it difficult to determine a valuable fact as to the amount of the albumen. Throughout the course of his illness, cystitis of some grade called for modification of treatment. The source of the blood, and the condition giving rise to its discharge, were questions of absorbing interest. Medical gentlemen of acknowledged ability differed regarding it from first to last. That the conditions were modified as the case progressed, there is now no good ground for doubt; but that it was cancerous from the first, nothing short of a *post mortem* and the microscope could have convinced some of his medical advisers. Epithelial degeneration it was.

Perityphlitic Abscess (*Ileo-cœcal ?*). *Artificial Anus Closed by Nature.* ROBERT L. BARRET, M. D., Louisa C. H., Va.

April 30th, 1859.—Dr. B. M. Francisco, æt. 56, a son of Peter Francisco, of Revolutionary fame, while on horseback, felt a sensation as if a worm was crawling back and forth over the anterior portion of the thigh, which continued to annoy him for several days.

May 1st.—Walked out and was taken with sudden nausea, and vomited stercoraceous matter; had no pain or headache; was rather costive, and had been very flatulent for several days.

May 2d.—Dull, heavy pain in right iliac region, just above Poupart's ligament a few lines only, and two inches anterior to the crest of the ilium. The parts became slowly swollen, reddish, and were very much indurated. In one month the swelling had attained enormous dimensions, occupying more than half the abdominal cavity, and began to soften only at the point where pain was first felt; and, though at that place the tissues became very thin, fluctuation did not extend over a space larger than a half dollar. Examination per anum with the finger discovered the tumor also. At this stage a diarrhœa set in, each stool showing a few drops of pus; the size of the tumor continued to increase. Now set in hiccough, cold, clammy sweats, low delirium, dry tongue, bed sores, and all the train of typhoid symptoms. The patient was on the verge of death. Many physicians had been to see him, on account of the novelty

of the case and his great popularity. There was too much sympathy; all feared to do more than palliate. The treatment was expectant and sympathetic.

July 1*st*.—With the consent of Dr. F. Perkins, I put the knife in where the abscess was soft, and made an incision two inches long. It was half an inch above Poupart's ligament, and along its outer third. There was a discharge of the most offensive gas, followed by a stream of pus and liquid fæces and scybala of more than a gallon. The distressing hiccough continued unabated for many days, only temporarily relieved by change of position.

July 5*th*.—Prof. C. Bell Gibson was called from Richmond to meet me in consultation, and for its moral effect, the report being circulated that I had *paunched* the patient; and upon his verdict my professional prospects in this section were to live or die. It was in favor of the operation. Dr. Gibson said, moreover, it should have been performed weeks before, and charged me not to close the *artificial anus* as long as it discharged pus.

September 9*th*.—The patient, having regained much strength, became disgusted and impatient with his condition, and Dr. Wm. A. Gillespie, our most celebrated surgeon, ventured to treat the closure with three suture pins. For a few days all went well; but it was the calm before the storm. On the fifth day after the operation the patient's suffering became so great that he got his negro nurse to pull the pins out, which procedure was followed by like quantity of fæcal pus, but as little gas as on July 1st.

December 20*th*.—The aperture had now become fully closed by nature.

March 20*th*, 1875.—Dr. F. called on me to-day. He is 72 years old, hale, hearty, and active, and is now actively canvassing the county for a public office. He says the parts draw a little, and there is slight numbness on the anterior portion of the thigh. The old cicatrix is tough, and of course indented.

The patient gives three possible causes: 1st. Five weeks previous to the first premonition of his attack he was poisoned by a negro, who put one hundred grains of acetate of lead in his milk, which he readily vomited, and then he took a large dose of calcined magnesia, which acted well. His face, eyes and scalp for many days were discolored with extravasated

blood. No other bad effects. 2. Four weeks previous he was thrown from his horse, but there was apparently no bad effect after the jar, except slight general soreness. 3. He had been chewing damaged tobacco for twelve months.

I respectfully refer your readers to the March number of the *Virginia Medical Monthly* for a report of some interesting cases and intelligent remarks thereon by Dr. J. W. S. Gouley.

Case of Umbilical Hernia Relieved by Ayer's Truss. A. W. FONTAINE, M. D., New Canton, Va.

A most estimable lady, fair, very fat, and 55 or 60 years of age, found, soon after the birth of her first child, that there was a soft, roundish protrusion from her umbilicus. At first she thought this not an unusual occurrence, and, being very diffident, said nothing about it. But with advancing years and repeated labors, the tumor enlarged, though it was always reducible to a great extent.

On a visit to the Northwest a year or two ago, she consulted her brother and brother-in-law, both clever practitioners. They succeeded in reducing "almost completely" the hernial mass, but "spoke of adhesions." These gentlemen applied, as a means of retention, adhesive plaster—first, a piece seven by nine inches square to cover the whole umbilical region; second, a perpendicular strip two inches broad, reaching from the pelvis to the top of the sternum; third, another like it applied horizontally, crossing the other exactly over the umbilicus; and fourth, two of the same applied diagonally and crossing each other, and the rest likewise over the aperture. Thus braced and supported, she experienced a degree of comfort she had not known for many years *so long as the plaster would stick*—from three to five weeks, by wearing a broad bandage around the abdomen.

A few weeks after her return home the writer was sent for in great haste to reduce the hernia. The plasters had become loosened and let out a mass of omentum and intestines, causing a tumor as large as a fœtal head. The tumor was hard, tense, and very tender to the touch. Strangulation had existed six or eight hours, and she was very sick. The first attempt at taxis was so painful that I desisted. Cold wet cloths were applied for forty or fifty minutes, when the reduction was effected

with great ease, both to the operator and patient. After reduction, examination revealed the following state of things. The aperture felt very like a horizontal subcutaneous rent; on the left margin, and a little below its level, there was considerable unreduced and adherent omentum; the skin was separated from the superficial fascia for a considerable distance around the umbilical opening, but at some points adhered to the omental protuberance; across the opening and parallel with its longest (horizontal) diameter was a strip of adhesion or plastic material, very narrow and cordlike in its middle, and flatter towards each end, which seemed to divide the aperture into two parallel slits. The same adhesive plaster appliance was put on to retain the bulk of the tumor, and she went on comfortably for a month or so.

Two or three times since I have been called on to reduce the mass, more or less strangulated each time. On the last occasion (in March, I believe,) I told her that this was a very expensive and troublesome way to deal with the matter, to say nothing of the danger, and advised her to go to Mr. Samuel Ayers, in Richmond, whose large experience and evident mechanical ingenuity would devise something better calculated to meet the difficulty of the case. I had repeatedly prescribed Mr. Ayres' elastic trusses for inguinal hernia, and always with the most satisfactory results. I was not disappointed in this case. The apparatus he made her is quite original in design, elegant in material and workmanship, and as far as I can now see, with slight modifications suggested by *himself*, is better calculated to meet the demands of the case, with its unusual complications, than anything else within my knowledge. The lady herself writes: "*It is as well adapted to my case as anything could be. I feel much stronger, and as if I had a new lease on life.*"

In form the truss is somewhat like a glass sweatmeat dish, with two diameters, and curves in conformity with the abdomen. The concave surface covers the entire tumor and gently presses thereon. The instrument is so supplied with loops that it may be used with an elastic belt longitudinally or vertically. It is so adapted that as the tumor relaxed and reduced (which it did), layer after layer of some soft substance placed within the cavity of the truss fills up the space caused by the recession of the swelling, and a gentle pressure is thus kept up at all times.

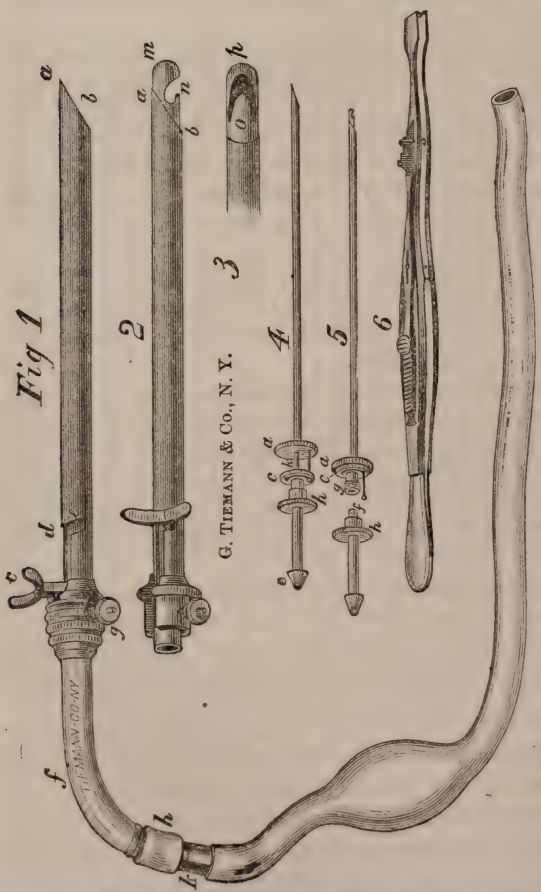
Correspondence.

The Dome Trocar.

NEW YORK, April, 1875.

Mr. Editor,—Through the kindness of Messrs. Tiemann & Co., Instrument Makers, &c., I am enabled to send you the accompanying electrotype of Dr. Fitch's *Dome Trocar*—a full account of which appeared in your April No. The description of the electrotype, herewith sent, is taken from the *New York Medical Journal*, April, 1875. Yours truly,

GEORGE W. WELLS, M. D.



Figs. 1, 2, 3, represent the ovarian trocar; 4, 5, the aspirator needles.

The intermediate sizes for paracentesis abdominis, hydrocele, paracentesis thoracis, and transfusion, are sufficiently expressed by one or all of these figures.

Fig. 1 has the dome retracted, disclosing the point and straight cutting edge (*a b*) of the outer canula, and occluding the instrument behind the point, against ingress or egress of fluids.

The thumb-rest (*c*) attached to the inner canula may be pushed forward in the slot (*d*) and turned into the branch-slot (*e*), advancing

the dome and bringing the fenestra to the under side (as in Fig. 2).

The tubular handle (*f*) has the larger end fastened upon the outer canula by the screw (*g*).

A recess in this end of the handle holds an India-rubber washer, which, fitting closely around the inner or dome canula, makes the continuity of the long India-rubber tube with the interior of the instrument virtually air-tight, and sufficient for all requirements in ovariotomy or in abdominal tapping.

But, should absolute imperviousness be desired for perfect exhaustion, or for injection of a cavity, the *handle* may be reversed, the smaller end (*h*) screwed upon the proximal end of the *inner* canula, and the orifice of the India-rubber tube drawn over the larger end of the handle.

Or the *aspirator* may be attached to the inner tube, either directly or with the intervention of the handle. The instrument, as at first made, had the handle continuous with the inner canula, and the thumb-rest upon the *outer* tube; but it is not so easily worked with one hand as in the present arrangement.

The India-rubber tube is shown in this figure with a bit of glass tube (*k*) by which the presence and character of the fluid may be observed, or its absence noticed.

The bulb is a *simple expansion of the tube*, so as not to interrupt the easy flow of fluid, or to whip the blood in transfusion, as might occur were the bulb connected by any sort of joint with the tubes, between which it is placed.

This bulbous tube may be used for the ordinary emptying or washing out of cavities, or for aiding the current from vein to vein in direct transfusion, or for quickening the flow from the elevated reservoir in mediate transfusion if it seems sluggish.

Fig. 2 shows the proximal end of the inner canula, projecting, to which the smaller end of the handle may be screwed, or the aspirator attached.

In this figure the thumb-rest is pushed forward, and turned into the branch-slot, projecting the dome (*m*) which sheathes the point and cutting edge (*a b*) of the outer canula, and disclosing the fenestra cut out of the under and side walls of the inner canula.

(*n*) in Fig. 2, and (*o*) in Fig. 3, show the curved process of the lower wall of the inner canula underlying the proximal third of the fenestra to prevent occlusion from contact of the sac or the vein-wall, or any other substance.

Fig. 4 is the aspirator needle with the dome retracted, and the nozzle attached.

Fig. 5, the dome projected and the nozzle detached.

(*a*) is a circular plate or disk, by which the outer canula is

advanced, or retracted upon the inner canula and dome, dispensing with the slot incident to the attachment of the thumb-rest to the inner tube.

(*k*) is a rod, playing in the slot (*c*), by turning which the tubes may be taken apart for cleansing.

(*e h*) the nozzle corresponding to the tubular handle of the larger sizes (*e*), the proximal end over which the India-rubber bulbous tube, or the tube of the aspirator, may be drawn.

(*f*), the distal end, *conical*, to be inserted into the *funnel*-shaped end (*g*), of the inner canula, and tightened and fixed by the hose-coupling nut (*h*).

Fig. 6 the *clamp forceps*, to be made light and slender.

Where the trocar is used for injection, the end of the inner tube, instead of having one fenestra, might be perforated with numerous small holes, so that the injection should issue from them in the form of spray.

Change of Climate for Consumptives.

Mr. Editor,—I do not propose to review the theories advanced and familiar to the profession, in favor of tuberculous patients seeking either a hot or a cold climate, but to express my conviction, from observation and experience, that the native climate of the patient is in many cases the best.

No stranger can expect to find the necessary comforts of home among a people who have only that interest in him which humanity prompts. Becoming acclimated is often more trying to one already enfeebled with disease than the disease itself. Therefore, without these disadvantages to contend with, if the same care is taken to find cheerful out-door exercise at home that is observed in travelling, more favorable results are to be hoped for. Many a poor unfortunate has been sent, with his death-warrant signed, to go anywhere, everywhere, where he ought not to go, in the vain hope of gaining a respite, only to break down his remaining strength by travel and disappointment, and to return home, if life lasts, in order to enjoy the privilege of dying among friends.

While a resident in Florida, I had ample opportunities of observing the progress and result of this disease. Hundreds of invalids from all parts of the North flocked there for the winter, and if they lived until Spring, left for home, with the express

purpose of returning the following winter; but before the appointed time, in many instances, death interposed.

If a change is made it should be at the outset of the disease, and the invalid should remain for years instead of months. Otherwise he is all the time undergoing the ordeal of acclimation at home and abroad.

No one locality is fitted for all patients alike. Those whose general health is better in winter, who are braced up, instead of being depressed by cold, and who in the summer are annoyed by exhausting diarrhœa, should find their new home in a cold climate; while those whose experience is the reverse, should seek a warm climate.

It must be remembered, however much is to be hoped for from what is considered a suitable climate, that good and evil are intimately mixed; and that we cannot get the unadulterated air as we would have it, but must take, on the one hand, chill, fever, diarrhœa, and debility, and on the other, bronchitis, influenza, pneumonia, &c., and in all probability die from those influences rather than from the effects of the original malady.

If what I have written will cause physicians to consider well the question, whether their patients should go *anywhere*, before sending them here, or there, in accordance with the popular idea that if one has consumption he must give up home with all of its comforts and associations, for strangers, privation, and discomfort, my object is accomplished.

Z. B. HERNDON, M. D.

Richmond, Va., March 22d, 1875.

Proceedings of Societies.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA.

Morning.—The 28th annual session convened in Montgomery April 13th—Dr. J. S. Weatherly (Montgomery), President, in the chair; Dr. Benj. H. Riggs (Selma), Secretary. Prayer by Rev. Dr. Stringfellow, Rector St. John's Episcopal Church (Montgomery).

Dr. Walter C. Jackson (Montgomery), on the part of the Committee of Arrangements, delivered the address of welcome—a very creditable effort in every respect.

The President of the Association supplemented the address of welcome made by Dr. Jackson by a few happy remarks.

Drs. A. W. Griggs (West Point), and R. T. Kendrick, (Morgan), of the Medical Association of Georgia, were, on motion of Dr. Michel, invited to seats and introduced by the President.

The minutes of the last meeting were read and approved.

The annual report of the Secretary was read by Dr. Riggs. After making acknowledgments for publications, &c., received, the report suggested the annual appointment of delegates to each of the neighboring sister State organizations—special mention being made of Virginia, North and South Carolina, Georgia, Tennessee and Mississippi. Virginia, South Carolina and Mississippi had appointed such fraternal delegates to this session. The concluding portion of the report concerns itself with the last published volume of Transactions, which has undoubtedly received the most handsome commendation and unstinted praise at the hands of critics of ability and discrimination everywhere.

The Treasurer, Dr. W. C. Jackson, presented his report, which was accepted.

The reports of County and City Societies, stating condition, list of officers, health of respective localities, &c., were read and filed.

On motion of Dr. Geo. A. Ketchum (Mobile), the Secretary was instructed to convey by telegram the fraternal regards of the Alabama Association to that of South Carolina, in session at Charleston.

Health and Mortuary reports for the past year of the various local Societies were presented and ordered to be filed.

The afternoon session was occupied with the address of Dr. E. P. Gaines (Mobile) on *Tuberculosis*, which had been prepared in accordance with the request of the Association at its last session. The address evinced careful study, and was heard with marked attention. It was the occasion of an interesting and profitable discussion, participated in by Drs. Jerome Cochran (Mobile), S. D. Seelye (Montgomery), B. H. Riggs and W. H. Johnston (Selma).

The night's session was occupied exclusively with the address of the President—the subject of which was "The Recent Act of the Legislature of Alabama which Constituted this Association the State Board of Health, and the Consequent Duties which this Act imposed upon the Association." His address is spoken of as an eloquent effort, delivered in an easy, graceful manner, which enchained the attention of his large audience, of which there were many ladies and non-professional gentlemen. After pointing out that it was within the power of the State

Board of Health, constituted as it is, to benefit the State greatly by *reducing* at least the rate of fatality from preventable diseases (cholera, small-pox, &c.), he remarked that the wide spread influence of miasm was the greatest impediment to increase of the population of Alabama by immigration. A proper system of drainage, &c., conducted under the supervision of the State Board of Health, he thought, would do much towards removing this impediment. He believed, moreover, that all moral diseases and inherited bodily infirmities were, to a great extent, preventable, and they, therefore, should be brought under the control of the State through the Board of Health.

Second Day—Morning.—Dr. Jerome Cochran presented his report on Public Hygiene, in which he spoke chiefly of the history of the *Small-pox Epidemic in Mobile* 1874–5. The report contained an incidental though valuable review of the history of the epidemics of the disease in several large cities. He discussed the questions of causation, danger, amount of destruction, and the proper plan of treatment.

This report gave rise to a lengthy discussion on the various questions involved in reference to small-pox, the principal participants in which discussion were Drs. E. P. Gaines, James Guild (Tuscaloosa), Baldwin, J. B. Gaston (Montgomery) and S. D. Seelye.

Dr. W. A. Bradfield read reports of cases of *Eclampsia*, and of *Caries and Necrosis of the Humerus*.

At night the annual oration was in order, but neither the orator-elect nor the alternate was in attendance. The President, however, was happy to introduce to the assembled audience Dr. George A. Ketchum, of Mobile, who had kindly consented, at the request of the Association, to fill the vacancy with an *ex tempore* address rather than that this part of the annual transactions should be omitted. His subject was the American Code of Ethics, and his address is said to have been interesting and profitable.

Third Day—Morning.—Dr. Griggs, of Georgia, expressed his appreciation of the cordial greeting which had been extended him.

Dr. A. S. McKeithen, of Autauga, read a paper on *Twin Gestation*, in which he maintained that twins can be born of different fathers.

Dr. F. M. Peterson, of Greensboro, discussed at some length the points taken by Dr. McK., but admitted the probabilities of different fathers in the instances mentioned.

Dr. Benj. H. Riggs read a very interesting paper on *Malaria*.

At the afternoon session, the following were elected officers for

the ensuing year: *President*, Dr. John J. Dement, Huntsville; 1*st V. President*, Dr. Peter Bryce, Tuscaloosa; 2*d V. President*, Dr. F. M. Peterson, Greensboro; *Censor*, Dr. W. H. Anderson, Mobile; *Orator*, Dr. R. F. Michel, Montgomery; *Alternate*, Dr. Caleb Toxey, Mobile; *Board of Health*, (who shall act in conjunction with Board of Censors), Drs. George A. Ketchum, Mobile, 5 years; E. A. Semple, Montgomery, 4 years; E. P. Gaines, Mobile, 3 years; C D. Parke, Selma, 2 years; S. D. Seelye, Montgomery, 1 year; *Secretary*, Dr. Benj. H. Riggs, Selma, and *Treasurer*, Dr. W. C. Jackson, Montgomery.

Drs. Gaines and Phillips (Tallassee) were appointed to conduct the 2d Vice President elect to the chair—the two senior officers elect being absent. The retiring President and the incoming President *pro tempore* made appropriate addresses.

Several proposed constitutional amendments lie over under the rules until next session.

Dr. S. D. Seelye, of Montgomery, offered a prize of $100 for the best essay on *Bright's Disease of the Kidney*—the question of merit to be decided by a committee at the next annual session. [Open, we suppose, only to the members of the Association.—Ed.]

The usual number of delegates to the American Medical Association and other Societies; also, usual thanks, were voted, after which, the session adjourned to convene in Mobile on the second Tuesday in April, 1876.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

April 13.—The 77th annual session convened in their hall in Baltimore at noon—Dr. Henry M. Wilson, President, in the chair; Dr. Wm. G. Regester, Secretary.

After the reading and approval of the minutes of last session, the reports of officers, committees, &c., were called. That of the Treasurer, Dr. J. Gilman, showed the assets of the Faculty, over liabilities, to be nearly $6,000. That of the Library Committee suggested, among other things, the re-establishment of the library of new medical books and journals. The Publishing Committee stated that 500 copies of the last Transactions had been issued.

After the transaction of other routine business, the regular order was, on motion, suspended for the purpose of hearing Dr. —— Kloman, chairman of the Section on Anatomy, Physiology and Pathology, read an essay upon the *Brain and the Effects of Electricity upon the Human System.* This paper is spoken of as one of interest to the profession. Referred to the Publishing Committee.

April 14—*Second Day.*—The Faculty re-assembled at noon, pursuant to adjournment.

Dr. Isaac N. Snively, delegate from the Medical Society of Pennsylvania, was introduced and invited to a seat.

Thanks were voted Dr. T. R. Brown for the gift of books to library.

Dr. T. R. Brown read the report of the Section on Surgery, which was referred to the Publishing Committee.

After a brief recess, Dr. Joseph M. Toner, of Washington, who had been invited to deliver the annual address, was introduced, and announced as his subject *The Medical History and Physical Geography of Maryland.* After referring to the high position taken by the early physicians of Maryland, in public as well as professional matters, he remarked that the day seemed to be past when physicians cared for position in the affairs of State. This he deplored, for the sympathies, education and thorough acquaintance of physicians with the people qualified them in a pre-eminent degree to become the representatives in Legislatures and Congress.

Turning to the history of the Medical and Chirurgical Faculty, he stated that it was chartered in 1799, with 105 members. Maryland, he said, had from an early period given special encouragement to professional studies. He referred to the endowment of the Johns Hopkins University and Hospital, and to the liberal policy of Legislature in establishing the State Board of Health, as among the means now at hand for promoting the usefulness of the profession.

In 1850, there was one physician in Maryland to every 588 of the population; in 1860, one to 628; and in 1870, one to 621. Yet with each decade the percentage of mortality has greatly lessened.

The Doctor then went into a lengthy description of the topography, &c., of the State. He dwelt at length upon the malarial causes of diseases especially of the Eastern sections. He then spoke of the effect of malaria generally upon the people, suggested its removal by adopting proper drainage systems, &c. He thought a competent civil engineer should be appointed by the Legislature to act in conjunction with the State Board of Health for obvious purposes. In closing his address, the speaker referred to the healthfulness of certain of the Western sections of the State—making special mention of the vicinity of Meadow and Negro Mountains, and of Winding and Keyser ridges as, in his opinion, excellent summer resorts.

On motion, the address was ordered to be published.

Dr. —— McSherry read the report of the Section on Ad

vances in Pharmacy, &c., which was referred to the Publishing Committee.

April 15—*Third Day.*—During the day's session, Dr. Saml. Theobold (Baltimore) read a paper on *Tinnitus Aurium;* Dr. R. C. Lee (Baltimore), one on *Infantile Convulsions;* Dr. George Halsted Boyland (Baltimore), one on *Cases in Foreign Hospital Practice;* Dr. Gleitsman, on the *Altitude, Climate, &c. Suited for the Treatment of Phthisis*; Dr. F. T. Miles, *Utility of Stöhrer's Constant Battery;* Dr. Geo. Reuling (Baltimore), *New Method of Treating Symblepharon* &c.; Dr. L. McLane Tiffany (Baltimore), *Contagion of Eruptions.* Each of these papers was referred to the Publishing Committee. Routine business occupied the remainder of the day's session.

April 15—*Fourth Day.*—The able address in Obstetrics, &c., by Prof. W. T. Howard (Baltimore) was the important part of the day's proceedings, which address was fully illustrated by diagrams, and the exhibition and explanations as to the use of the proper instruments in cases requiring interference.

April 17—*Fifth Day.*—Prof. Samuel C. Chew (Baltimore) concluded the reading of an exhaustive and most valuable paper on the *Use of Digitalis in Heart Diseases.*

Committee reports were presented and properly referred.

Election of Officers.—Dr. John F. Monmonier, President; Drs. Christopher Johnston, A. B. Arnold and J. Carey Thomas, Vice Presidents; Drs. W. G. Regester and G. L. Taneyhill, Rcdg. Secretaries; Dr. Lindley Ellicott, Corspdg. Secretary; Dr. Judson Gilman, Treasurer. Chairman Executive Committee, Dr. S. C. Chew; Library Committee, Dr. G. L. Taneyhill; Publishing Committee, Dr. W. G. Regester; Memoir Committee, Dr. J. Gilman; Honor Committee, Dr. P. C. Williams; Board Examiners Western Shore, Dr. N. R. Smith; of Eastern Shore, Dr. W. G. Wilson; of Surgery, Dr. C. Johnston; Practice of Medicine, Dr; A. B. Arnold; Obstetrics, &c., Dr. W. T. Howard; Materia Medica, Chemistry, &c., Dr. D. I. McKew; Epidemics, Meteorology, Hygiene, &c., Dr. E. Lloyd Howard; Anatomy, Pathology, &c., Dr. H. R. Noel; Psychology, Physiology, &c., Dr. J. S. Conrad—all of Baltimore. Delegates to American Medical Association, Dr. N. R. Smith and 29 others; to Medical Society of Pennsylvania, Dr. J. C. Thomas, John Morris and J. Robt. Ward—all of Baltimore Co.; to Medical Society of New York, Drs. John F. Monmonier, A. Friedenwald and Thos. R. Brown—all of Baltimore; to Medical Society of Virginia, Drs. Henry R. Noel and Judson Gilman, of Baltimore, and Chas. H. Ohr, Alleghany Co.

Adjourned, after voting usual thanks, &c., until next May.

SOUTH CAROLINA MEDICAL ASSOCIATION.

April 13.—The 25th annual session convened in Charleston, Dr. James McIntosh (Newberry), President, in the chair; Dr. Henry D. Fraser (Charleston), Secretary.

On motion, Dr. Joseph Gibson, Post Surgeon U. S. Army, was invited to attend the meetings of the session.

The President selected as the subject of his annual address *The Hypodermic Use of Extract of Ergot in Uterine and other Hemorrhages.* It was an able paper, and was ordered to be published.

The committee, appointed at the last session, to report at this on *Bright's Disease*, presented through its chairman, Dr. J. Frank M. Geddings (Charleston), only an abstract of the paper, because of its great length. The entire paper was ordered to be published. This report, which, it is understood, is from the pen of Dr. Geddings—who is remarkable for the diversity and exactness of his information—is spoken of as particularly good and well worthy of perusal.

At the evening session the important paper was the report of the committee on *Puerperal Convulsions*, presented by the chairman, Dr. J. Ford Prioleau (Charleston). An animated discussion followed the reading of this paper, which was also referred to the Committee on Publications.

Several invitations were presented and accepted.

April 14.—The resignation of Dr. George Howe (removed from the State) was accepted.

Dr. S. Baruch (Camden) read a most interesting report of a case of *Excision of the Entire Upper Jaw for Fibroma;* also the report of a case of *Acute Articular Rheumatism with Heart Complications Successfully Treated by Cold Water Baths.* Valuable discussions arose on these reports, participated in by Drs. R. W. Gibbes (Columbia), M. Michel (Charleston), T. G. Simons (Charleston), and J. F. Prioleau. Thanks were voted the author, and the papers were referred to the Publishing Committee.

Dr. F. L. Parker exhibited an *Apparatus for Preventing the Contraction of the Cicatrices after Burns*, and showed a case in which he had successfully used it.

Dr. A. A. Moore (Camden) read a very interesting paper on the *Essential Nature and Causes of Meningitis Spiralis.* Several of the points taken were discussed by Drs. M. Michel and S. Baruch, after which the paper was referred to the Publishing Committee.

The Secretary was requested to make proper acknowledgement of receipt of telegram from the Alabama Medical Association, in session at Montgomery, conveying fraternal greeting, &c.

Dr. M. Michel presented a patient suffering with *Hemiplegia with Ptosis and Mydriasis.*

Dr. R. A. Kinloch (Charleston) read a paper on *Intra-Uterine Elastic-Spring Stem Pessary*, which excited an interesting discussion. Thanks were voted the author, and the paper was referred to the Publishing Committee.

Dr. J. Ford Prioleau exhibited a modified pessary, and made some explanatory remarks. Drs. Baruch, Gibbes, Kinloch, and others entered into a prolonged discussion as to the merits of the modification.

Dr. E. B. Turnipseed (Columbia) called attention to some instruments of his invention for the operation for the cure of vesico-vaginal fistulæ. He was requested to make a further report, at the next annual meeting, as to the practical utility of the instruments, which attracted the favorable attention of gynæcologists present.

Dr. S. Baruch was appointed chairman af the committee to report on Traumatic Tetanus at the next session.

Dr. B. W. Taylor (Columbia) was requested to prepare a report, for the next session, of a case upon which he had recently performed *laryngo-tracheotomy because of a laryngeal tumor*, which gave partial relief to the patient.

Dr. S. Baruch presented the patient with *Traumatic Epilepsy*, reported in the last Transactions, whose skull Dr. J. T. Darby (Columbia) had trephined. Since the operation the patient has had only three convulsions. Prior to the operation the fits recurred as frequently as two or three times a week.

At the evening session, Dr. J. W. Angel (Charleston) exhibited a *Ruptured Uterus*, and gave a brief history of the case, and an account of the autopsy. Several members discussed the subject.

Dr. F. Peyre Porcher read a paper on the *Open Dressing for Wounds.* Referred to Publishing Committee.

Dr. A. P. Wylie (Chester) detailed a case of *Strychnia Poisoning*, and also read a report on the *Use of Atropia in Threatened Abortion.* Referred to Publishing Committee.

Dr. J. F. M. Geddings' proposed constitutional amendment providing for the appointment of a State Committee of Medicine and Public Hygiene, was adopted. Drs. J. F. M. Geddings, B. W. Taylor, E. B. Turnipseed, J. C. Spann (Stateburg), Manning Simons (Charleston), and J. T. Pearce were appointed.

The following *officers were elected:* [A singular ommission in the report before us is the name of the President-elect.—Ed.] Drs. J. F. M. Geddings, E. B. Turnipseed, and L. A. Wright (Bamberg), Vice-Presidents; H. D. Fraser, Recording, and J. S.

Buist (Charleston), Corresponding Secretaries; T. G. Simons, Treasurer. Usual number were appointed as delegates to the American and other Medical Associations.

KENTUCKY STATE MEDICAL SOCIETY.

April 13.—The 20th annual session convened in Henderson—Dr. J. Baker (Shelbyville), President, in the chair; Dr. J. A. Larabee (Louisville), Secretary.

Dr. J. H. Letcher, chairman of the local Committee of Arrangements, delivered an appropriate address of welcome.

After the reading of the Recording Secretary's report, and that of the Credential Committee, Dr. Larabee proposed as a constitutional amendment that local Societies shall hereafter make annual reports to the State Society of their condition, &c.

Dr. J. M. Keller, from the Committee on the Ephraim McDowell Monument, reported that but little progress had been made in securing the necessary funds. On motion of Dr. J. M. Holloway, the President and Secretary of every local Society was directed to secure every possible subscription to carry out the object in view.

Memoirs of Drs. Henry Miller, Thomas L. McNary, and others were presented and referred.

At the afternoon session, on motion of Dr. Larabee, delegates from local societies will hereafter be received by the State Society.

Dr. W. H. Long (Louisville), under call for special reports, &c., read an excellent essay on *Dysmenorrhœa*, which was referred.

Greetings from the Tennessee Medical Society (in session at Nashville), received by telegraph, were read and ordered to be spread upon the minutes.

Dr. J. Hale (Owensboro) read a paper on *Glioma Retinæ*, which was referred.

Dr. D. S. Reynolds (Louisville) also read an interesting paper entitled *Notes on Ophthalmia.* Referred.

Dr. T. J. Griffiths (Louisville) presented a paper on the *U. S. Marine Hospital.* Referred.

Dr. C. S. Fenner (Louisville) read quite a full paper on *Cataract.* Referred.

Dr. S. Brandeis (Louisville) followed with a very interesting paper on *Spectacles.* Referred.

At night the President delivered his address. A large audience of ladies graced the occasion. The speaker is said to have "met the best expectations of his friends."

Social receptions were given by several of the citizens after adjournment.

April 14.—The Committee on Nominations of *Officers for the Ensuing Year* reported: Dr. J. A. Hodge (Henderson) for President; Drs. T. Anderson (Louisville) and O. Newland (Hopkinsville), Vice Presidents; J. A. Larrabee, Secretary; J. W. Singleton (Paducah), Treasurer; J. J. Speed (Louisville), Librarian. The report was received and confirmed.

On motion of Dr. Larrabee, no one is to be appointed delegate from the State Society to the American Medical Association who is already appointed by a local Society.

On motion of Dr. J. L. Cook (Henderson), the Secretary was instructed to notify Presidents and Secretaries of local Societies concerning the action taken yesterday in reference to the McDowell monument.

On motion of Dr. D. S. Reynolds, Dr. S. A. Foss was voted thanks for his efforts in behalf of the profession before the Legislature in reference to certain proposed sanitary laws, and was requested to continue on the Committee.

The President introduced the President-elect, who, after thanking the Society for the compliment bestowed on him, stated, however, that the precedent of electing the President from the city in which the session was held was wrong, and therefore offered his resignation; but the resignation was not accepted.

Dr. D. W. Yandell (Louisville) read a paper on *Ovariotomy*, in which paper he reports three operations recently performed by himself. Out of thirty odd cases operated on in Louisville and Jefferson County, there had been nine recoveries.

Dr. J. M. Keller (Louisville), by permission, referred the report of the Committee on Surgery to the Publishing Committee —without reading.

Dr. L. P. Yandell (Louisville) presented a supplemental report to the one read last year on the *Medical History of Kentucky*, which was referred to the Publishing Committee.

At the *afternoon session*, Dr. Reynolds read for Dr. W. E. Ryan (Simpsonville) a paper on *Tubercular Phthisis*. Referred.

Dr. D. W. Yandell presented a synoptical report of three operations of *Lithotomy* and three of *Tracheotomy*, which he had successfully performed. Referred.

Dr. R. F. Logan (Shelbyville) read a paper on *Fistula in Ano*. Referred.

Dr. J. M. Holloway (Louisville) presented a report on *Opium Eating and Supposed Attempted Suicide*. Referred.

Dr. J. P. Thomas (Christian Co.) reported a case of *Penetrating Wound of the Cranium*, in which the breech-pin of a shot-

gun penetrated and remained in the brain, and the man recovered.

Hopkinsville was selected as the place for the next session.

Dr. J. L. Cook (Henderson) read a paper on the *Curability of Acute Diseases.* Referred.

Dr. L. P. Yandell announced his intention of publishing at an early day a work entitled *The Medical Literature of Kentucky.* On motion, Secretaries of local Societies were requested to forward such information as could be obtained that would lend to the object in view.

Drs. L. P. Yandell and Geo. Beeler (Clinton) were appointed delegates to the Tennessee Medical Society; and other special committees were announced.

Greetings from the Mississippi State Society, in session at Vicksburg, were received, and ordered to be acknowledged.

Members of local Societies were recommended to make monthly statements of their accounts against patients, and to keep "black-list registers" of those who sought aid without offering compensation—of course, not to interfere with true charity.

Adjourned to meet next year at Hopkinsville.

At night, several private entertainments were given the members.

During the session, several druggists, instrument makers, &c., had on exhibition articles of their manufacture. As a whole, this session was important and pleasant.

Original Translations.

The Composition of the Blood in Pregnant Women—Utility and Inconvenience of Blood-letting During Pregnancy—Its Influence on the Development of Puerperal Diseases—The Varied Treatment of Eclampsia. By Prof. Vernier. By J. S. WELLFORD, M. D., Professor Materia Medica, Med. Col. Va., Richmond.

M. Michel Peter, the learned clinical teacher of the Saint Antoine Hospital, has only indicated a well known fact when he speaks of the increase of serum in the blood of the pregnant woman; and other authors, equally creditable, have, in support of this fact, described the hypertrophy of the heart, and especially of the left ventricle, during pregnancy (P. Budin, Sée &c). While the pregnant woman breathes for two, her heart should also act for the same number; and the *Gazette Obstetricale*, Dec.

5, 1873, has called the attention of its readers to this temporary physiological condition. I say physiological condition, for if the left ventricle did not become hypertrophied, there would be cardiac insufficiency, venous congestion in the lower limbs, varices, thrombus, œdema and even infiltration.

But there is also another point in the composition of the blood which has been observed by all authors who have devoted themselves to hœmatology (Andral et Gavarret, Piorry, P. S. Denis, Becquerel et Rodier, &c.), viz: aglobulism, diminution of the globules, what M. Peter calls *anœmia by quality*, which he properly distinguishes from the increase of serum, *plethora by quantity*. M. Peter, recognizing this aglobulism, which, by the researches of Andral and Gavarret, cited by M. Peter himself, exists in three-fourths of the cases (26 in 34), accuses the accoucheurs of concluding that "all pregnant women are anæmic." With all deference, I do not believe that this reproach is well founded. And I believe he will discover his mistake if that eminent confrère would turn over the leaves of Cazeaux and Joulin, to quote only the most recent standard authors; for we are solely interested, according to M. Peter, in contemporary authorities, as he states that it is only in the last 40 years that "the revolution in doctrine which regards every pregnant woman as anæmic" had, according to M. Peter, completely and entirely changed the therapeutics on this subject, and that since that period the frequency of cases of eclampsia had been gradually increasing because "we no longer bleed pregnant women."

But Rayer, who was not an accoucheur, has discovered long since the albuminous nephritis in the pregnant woman. Becquerel and Rodier, in a memoir presented to the Academy of Sciences, Nov. 12, 1844, attributed a very important pathological part to the impoverishment of the blood in pregnancy, but which did not prevent the accoucheurs from often meeting with cases of plethora, less, doubtless, in Paris than in the country. Finally, blood-letting, far from being proscribed entirely, is, on the contrary, prescribed in the beginning of mechanical eclampsia every time that the practitioner detects plethora or congestion; always when this congestion is localized in an organ, especially the uterus, we bleed; we bleed in rigidity of the os, a frequent occasional cause of eclampsia; we bleed always when

in former abortions we have discovered one of the forms of placental hæmorrhage; also, in aged primiparæ, when the habitude of an abundant *molimen hemorrhagicum* suggests the fear of a flooding during pregnancy; we, moreover, bleed at the commencement of these hemorrhages, according to the cases, as a derivative or depletive remedy. We may, therefore, say with confidence, that if blood-letting has been preserved as a therapeutic remedy, it is due to the accoucheurs. Indeed, if any criticism may be made to the Professor of the Obstetrical Clinique of the College, it would rather be that he uses blood-letting in cases of eclampsia in a too general and systematic manner without seeking to ascertain the cause of the disease, since it is now demonstrated that the causes of this frightful neurosis are extremely variable, and that alongside of a case which requires blood-letting, we find another which demands the use of the derivatives, the tonics or the anæsthetics.

Let us not forget we have here present the influence of puerperality—"puerperal eclampsia"—and although the delivery most frequently has not taken place, or even the woman has not arrived at term, nevertheless, the time is very near when the least accident, the slightest wound, a perineal rupture, varices, a phlebitis may develop pyæmia, or purulent phlebitis, because of the great susceptibility of women in the puerperal condition to all diseases of this character. But what is the pathological condition which chiefly predisposes the lying woman to this pyæmia, if it is not this aglobulism, this impoverishment of the blood? Also, the puerperal phlebitis is always characterized by a special cachexia, and the principal symptoms are pain, discoloration of the tissues, and white inflammation, *phlegmasia alba dolens*, that is, the absence of inflammation, according to the nosological definition of that word, but a condition, nevertheless, when the seat of the disease resides in the veins and not in the other vessels nor in the neighboring tissue.

This inopexia, as it has been called, this alteration of the blood characterized by the coagulation of the fibrine, is also aided by the affection of the fibrine itself (see the analysis stated below) and by the aglobulism, and in the recently delivered woman, such conditions being present, we will soon have a suppurative phlebitis with all its cortege of symptoms. Whence I

conclude, despite whatever M. Peter may say, that accoucheurs may restrict with great advantage the use of blood-letting in the city and in hospitals, as well in eclampsia as in certain other puerperal affections not purely inflammatory, and where the abstraction of blood would only place the patient in a very unfavorable condition as to the subsequent circumstances—pyæmia, purulent or putrid absorption and finally convalescence.

Every accoucheur has observed the liability of eclampsic patients to be attacked by one of the forms of puerperal fever, and this frightful disease, we also know, is very frequent after large losses of blood (hæmorrhages or blood-letting).

Churchill has observed paralysis follow large hæmorrhages. It will therefore be our duty to avoid as far as possible all danger and the greater frequency of eclampsic cases, which does not appear to me to be certainly proved; but, if true, may be in intimate relation to the larger development of all kinds of neuroses, and to the epidemic anæmia in the large centres of population.

Again, one word as to the constituent elements of the blood; I allude to the albumen. In the analysis of the blood in the healthy woman, M. Peter has declared that the average of the globules was 127; but he has forgotten to tell us what was the proportion of the albumen. I may be permitted to recall here that the average of this substance is 70.5—that is, in a healthy woman not pregnant. But in a pregnancy otherwise without complication, it will be easily seen that that condition exercises a marked influence on the composition of the blood, which shows itself, not only by a diminution of the globules and an augmentation of the serum—the only elements mentioned by the learned Professor of Saint Antoine Hospital—but also by a *diminution of the albumen*, a slight augmentation of the fibrine and of the fatty phosphuretted matter. What, therefore, will be the case, should the pregnant woman become sick? To enable the reader to appreciate the elements of the process by a knowledge of the causes, let us place before his eyes the two views of the question:

Composition of 1,000 *Grammes of Blood.*

Density of Defibrinated Blood, in the healthy woman, 1057.5; in the pregnant woman, 1051.5.

Density of Serum, in health, 1027.4; in pregnancy, 1025.5.

Water, in health, 791.1; in pregnancy, 801.6.

Globules, in health, 127.2; in pregnancy, 111.8.

Albumen, in health, 70.5; in pregnancy, 66.1.

Fibrine, in health, 2.2; in pregnancy, 3.5.

Extractive Matter and Freesalts, in health, 7.4; in pregnancy, 6.6.

Fatty Matter, in health, 1.620; in pregnancy, 1.922.

Seroline, in health, 0.020; in pregnancy, very variable.

Fatty Phosphuretted Matter, in health, 0.464; in pregnancy, 0.646.

Cholesterine, in health, 0.090; in pregnancy, 0.061.

Soap, in health, 1.046; in pregnancy, 1.195.

If we then examine the calcined blood, we will find:

Chloride of Sodium, in the healthy woman, 3.90; in pregnancy, 3.20.

Soluble Salts, in health, 2.90; in pregnancy, 2.40.

Phosphates, in health, 0.354; in pregnancy, 0.425.

Iron, in health, 0.541; in pregnancy, 0.449.

Now, therefore, we have diminution in the density of the defibrinated blood and serum, augmentation of the proportion of water, marked fall in the number of the globules and of the quantity of the albumen, variation more or less of the other elements, slight increase of the phosphates which, are necessary for the formation of the bones of the embryo, and sensible diminution of the iron.

This analysis, by Becquerel and Rodier, was made on nine pregnant females, healthy and already considerably advanced in pregnancy. These nine women were, the oldest 41, the youngest 20. Five had a good constitution, the others were feeble. Three were fat, two thin, and the other four an average fleshiness. Six were in easy circumstances, two alone being poor. Six were in excellent health, if we except the symptoms of plethora, for which they were bled. Three only presented the bellows murmur in the carotid, and these were thus arranged as to the duration of their pregnancies: 1, pregnant four months, 4 five months, 1 five months and a half, 1 six months, 2 seven months.

In almost all, as M. Peter has observed in other cases, we find

the symptoms of plethora, notwithstanding the impoverishment of the blood. They complained, in fact, of vertigo, ringing in the ears; in some there were somnolency, general dullness. Thus, their accoucheurs did not hesitate to bleed them, and they had been relieved, which confirms the principle that whatever may be the composition of the blood, whether rich or poor in globules, there may be in either case plethora or anæmia.

But these modifications, essentially physiological in the healthy, pregnant woman, are still more profound towards the close of pregnancy, and yet more so when the woman is ailing, when she is eclampsic; so that these modifications themselves may be relied on to explain certain grave conditions which occur during pregnancy and the puerperal period. Thus, in the predisposition to eclampsia, the albumen of the blood, already diminished in quantity by the pregnancy, is still more diminished by the passage of it in the urine (8 cases in 10). The proportion of albumen thus diverted from its physiological use may be considerable; its production, doubtless, is increased, but always in a smaller quantity than is expelled, so that the patient rapidly arrives at a cachetic stage, which directly places her not only under the influence of the neurosis so dreaded by obstetricians, but also in a dangerous condition with regard to the invasion of puerperal diseases after her delivery—the super-albuminose of Gubler. What yet might I not say if I desired to consider the cases of blood poisoning by the urea, the carbonate of ammonia, &c., uræmia, urinæmia (Schöttin), ammonianæmia (Frerichs).

But I will stop. What I have said will suffice to explain why the accoucheurs, although knowing the aglobulism and increase of serum of the blood in their patients, have nevertheless considered plethora as a symptom in pregnancy, and made a more or less extensive use of blood-letting; that it is, therefore, unjust to attribute to them because of this abandonment of venesection the increased number of eclampsic cases which have been produced in the last 40 years (allowing that this increase is proved in a general sense); that on the other hand, knowing also, to confine ourselves to eclampsia, which alone has been the subject of discussion, that the loss of albumen is considerable, far from applying in all cases of eclampsia where the albumen has been found abundant in the urine, the antiphlogistic treat-

ment, they should ascertain the origin of the malady and seek the causes, which are multiple, and use in this affection essentially protean—a protean treatment which should vary according as the eclampsia is uræmic or non-uræmic; for, as Prof. Jaccoud has said, "we should avoid the blind and ignorant therapeutics which pretends to combat a disease of variable causes by means always the same."—*L'Abeille Medicale*, Feb. 22, 1875.

Book Notices, &c.

The Asiatic or Bengal Cholera of 1867 *to* 1873. By JOHN C. PETERS, M. D., New York, President of the Med. Library and Jour. Ass'n; 1st Vice-President N. Y. Med. Legal Society, etc. (Reprint.)

Sects in Medicine. By same author. (Reprint.)

The *first* of these pamphlets gives an excellent resumé of the history of cholera from 1867 to 1873; and while it does not present anything that is especially new, it yet gives a great deal of information on the subject, in a most readable manner and in small compass. Dr. P. deserves great credit for his laborious and useful researches on this subject.

The *second* is a literary production of high order, and will well repay careful perusal by every one interested in the history and literature of medicine. M. P. C.

Philosophy of Uterine Diseases. By THOS. ADDIS EMMET, M. D., Surg. to Woman's Hosp., State of New York, etc. (Reprint.)

We have read this paper with great interest, as we do everything that emanates from this high source. It is written with great care and candor. The views and treatment of the author are not only original, but are based on sound principles which must commend themselves to all who read the paper and are interested in the study of gynæcology. M. P. C.

Report of the Surgical Cases Treated in St. John's Riverside Hospital, Yonkers, N. Y., during the year 1873 (*Fourth Year*). By J. H. POOLEY, M. D. (Reprint.)

This pamphlet of 29 pages contains a well written history of a number of interesting cases—some of them especially so. Dr. Pooley has certainly the merit of honesty of purpose, for he reports here the *unsuccessful* as well as the successful cases, which is not always the case with those having charge of much more pretensious institutions. M. P. C.

Pamphlets received:

Climatology of Florida.—The address by Dr. A. S. Baldwin, President, &c., before the Medical Association of Florida at its annual session Feb. 17th, 1875, is a very important paper. Now that Florida is a popular health resort, physicians should inform themselves as to the facts stated in this address.

The Model Physician and *Model Patient.* By Prof. H. D. Didama, M. D., Syracuse, N. Y. Very readable papers—the first being a valedictory address delivered last February, the other an extract from address to the alumni of Albany College.

A Reply to the Proceedings of the Philadelphia Drug Exchange on the Proposed Tariff Revision. By D. C. Robins, N. Y.

Report of the Metropolitan Throat Hospital, (New York) 1874.

Gastrotomy and Gastrostomy (Reprint from *R. & L. Med. Jour.*, April, 1875). By J. H. Pooley, M. D., Yonkers, N. Y. A paper of historical, statistical and scientific value.

Rupture of the Perineum, with Description of a New Operation. By Prof. D. W. Brickell, M. D., New Orleans. A reprint (from *Amer. Jour. Med. Sci.*, April, 1875) that we regret not having the space to notice, since the "new operation" commends itself to favor.

In response to inquiries concerning journals devoted specially to the eye and ear, we take this occasion to say that the *Archives of Ophthalmology and Otology*, New York, is the only one in America devoted to these specialties, and is a most excellent one, too. Quarterly: Subscription, $5 per annum. Prof. H. Knapp, M. D., American editor.

The Medical Register and Advertiser is the title of a new quarterly journal of 64 pages started at Anna, Ill., Feb. 1875; subscription $1.20 per annum; James I. Hale, M. D., Editor. The number before us is a very interesting one, and shows an enterprising spirit on the part of the proprietor.

Salicylic Acid is being used in Rosevelt Hospital, N. Y., (ʒj to ℥lxijss of water) as a dressing for wounds, ulcers, etc. Its substitution for carbolic acid has been agreeable and satisfactory. In New York (*Med. Record*, April 3d) it sold for 80 cents an ounce.

Medical Graduates.—During 1874, the Medical Colleges of the United States graduated 3,000; during the same period, Germany graduated 660. The population of the former country is estimated at 40,000,000; of the latter 42,000,000.

Editorial.

SPRINGS AS SUMMER HEALTH RESORTS.

We shall make use at another time of the notes we had prepared on this subject for this issue, while we cheerfully yield the space we had intended appropriating, in order that the able contributions of others may be enjoyed by our readers.

It was our purpose, however, now that the "spring-going season" is near at hand, to have combatted the too prevalent notion—even among physicians—that it is *only* the change of city life for the air, the scenery and general surroundings at "the springs" that does all the good—that brings back to the cheek the tinge of healthful beauty; that restores to the wasted form its wonted grace and symmetry; that imparts anew manly vigor of mind and body to the weakened energies of those prostrated by the wear and tear of business or professional life. Such influences do, indeed, have their effect; but we are bold to affirm, after some study of the subject, that an insufficient value is too frequently ascribed to the *directly* remedial virtues of the fountains that gush fresh from the mineral laboratories that Providence has made accessible to man. We cannot bring ourselves to think that the numerous direct testimonies of men of scientific culture in favor of the proposition we affirm to be true should be taken for nought. In fact, we may say that the analyses of cases we have taken the trouble to collect indubitably prove the correctness of our position.

But even among those who credit this proposition, we are continually seeing committed the most serious errors of advice to patients. Even many of those admitting the therapeutic value of mineral springs are in the habit of allowing their patients to go to any of the springs to which their personal inclination or taste may lead them. As well put such patients inside of a drug store and tell them severally to appropriate those agents most palatable or best suited to their fancies, and then expect cures to result! The chemical properties and therapeutic virtues of all the springs are scarcely more alike one to the other than are the different drugs upon the apothecary's shelf; and yet this very rudimentary principle in the science of the application of remedies to disease is, strangely enough, ignored every day by even good physicians in other respects.

Just here, too, lies one of the errors in the advertisements of many of the springs. They should invariably present analyses of the chemical constitution of their waters. Without such analyses, the physician is as much in the dark as to the effect to be expected from their use as when he undertakes to prescribe any of the proprietary or quack preparations that flood the land.

The western sections of Virginia and North Carolina and West Virginia especially have been favored in the bestowal of these natural blessings. These springs, however, possess more or less distinct therapeutic virtues—though most of them claim attractions of like character for those whose *only* object in visiting the springs is to get away from city miasm and the sultry heat of less favored sections of country, and to spend a season in the mountains where youth and pleasure are wont to meet.

In the appropriate department, we present the advertisements of three of these Virginia resorts. These advertisements present tables of the composition of the waters, which, to the well informed medical man, will suggest their specific uses. In general terms, it may be stated that the composition of the waters of the Blue Ridge, the Bath Alum and the Healing Springs indicate that their general remedial virtues are those chiefly of alteratives. The first of these, however, would seem to be more useful in the various chronic troubles of the mucous surfaces; and experience has confirmed the fact that disorders of this class, such as many forms of dyspepsia, mucous diarrhœa, torpor of the bowels, congestions of the liver, uterus, kidneys, &c., are all relieved by the judicious use of these Springs. The Bath Alum and the Healing Springs are more especially indicated for those more decidedly "constitutional diseases" where stronger alterative and tonic effects are desired. The large proportion of alumina and other salts commends the waters of the Bath Alum for the former purpose, while the remarkably large proportion of iron in the form of protoxide indicates their tonic uses. Hence it is that those having diseases dependent upon the dartrous or scrofulous diathesis, etc., may confidently expect to derive benefit from these Springs. The Healing Springs, on the other hand, are very mildly chalybeate, but a glance at the chemical analysis of the waters of these Springs will indicate their special

utility in diseases dependent upon the rheumatic or gouty diathesis. Indeed, these Springs have attained a justly enviable reputation as a curative resort for these classes of patients.

In their local arrangements, each of these Health Resorts presents attractions equal to any—so far as the comfort and pleasure of visitors are concerned. Indeed the growing popularity of the former of these Spas has induced the proprietors to enlarge their accommodations. A new and elegant row of cottages has been built and furnished since the last season. The accessibility of the place, the untiring and hospitable attention of the manager, the real city comforts which one finds there, on the top of the Blue Ridge mountains, together with the remarkable medicinal virtues of the waters in the class of diseases mentioned have served to give an enviable reputation throughout the country to this summer resort during the two seasons in which it has been opened to the public. The arrangements at the well known Bath Alum Springs, located near the centre of the mineral springs district of Virginia, are no less comfortable. All the buildings are of brick, arranged in the form of a crescent, fronting southwardly on a well shaded level lawn of ten acres. All the apartments have been newly furnished. The wild grandeur of the surrounding scenery adds its invigorating effect, while the equable temperature, seldom rising above 80°, even during the hottest summer day, or falling below 70°, makes it in every respect a delightful summer resort. Visitors to the long celebrated Healing Springs will find no less ample accommodations for their pleasure and comfort than at either of the others; and being within a short distance of the Bath Alum, what has been said as to the scenery and natural advantages of that place is equally applicable to this.

Other Springs would call for special remark as health resorts had we the space to allow. But our object will have been accomplished if our remarks serve to remind physicians that there is as true and weighty responsibility resting upon them in recommending "the Springs" to their patients as when they write specific prescriptions to be filled at the apothecary's shop.

At a more suitable time we propose to begin, in compliance with requests made of us, a series of papers on the subject hinted at in these remarks—in which we shall try to present the *Ther-*

apeutic Virtues of the Principal Mineral Springs, especially those of the Southern and Middle States.

DAMIANA.

Our thanks are returned to Dr. H. Helmick, Druggist, Washington, D. C., (whose advertisement appears in another column), for samples of the *Damiana Plant* and of the Fluid Extract which he prepares according to the formula given on each bottle of his preparations. Damiana is one of the agents lately introduced into the United States; and we have not had time to become satisfied, from the experiments we have undertaken, as to its therapeutic uses or classification, further than to note the fact that it acts as a very potent bitter tonic in exciting the appetite and in stimulating the process of stomachic digestion. But the very interesting paper by Dr. Caldwell on another page of this number of the *Monthly*, details the results of some experimental uses of the agent. Should his observations be confirmed by future trials, the drug must be classed among the nervous stimulants and tonics, and as exhibiting a special or direct action upon the genital organs when its use is long continued. It would then occupy a very prominent position as an aphrodisiac, since, being comparatively free from poisonous or injurious action, it would be preferred to those potent agents now generally used to stimulate the genital function—strychnia and phosphorus.

Because of the broken or pulverized condition of the leaves and stems sent us, it is hard to arrive at any botanical classification. These leaves have a mild bitter, slightly astringent taste, not altogether unlike that of sage that has lost much of its flavor by long exposure. Its odor also reminds one of the presence of sage that has been long exposed. The fluid extract has none of this "sagey taste," but is more like that of a weak quassia infusion.

We shall be glad to have notes of the experience of those who may use the agent.

Centennial Medical Commission of Philadelphia.—At the session held April 19th, it was agreed that all American delegates to the International Medical Congress, to convene in Phil-

adelphia May, 1876, shall pay five dollars on registering to aid in defraying the expenses of publication; and that a dinner shall be arranged for, and each delegate be charged five dollars for a dinner ticket. Foreign gentlemen in each case are to be regarded as guests.

The following arrangements were made for addresses on: *Medicine and Medical Progress in the United States*—Prof. Austin Flint, Sr., M. D., New York. *Surgery*—Prof. Paul F. Eve, M. D., Nashville. *Obstetrics*—Prof. Theophilus Parvin, M. D., Indianapolis. *Materia Medica and Therapeutics*—Prof. Alfred Stillé, M. D., Philadelphia. *Medical Jurisprudence and Toxicology*—Prof. Stanford Chaille, M. D., New Orleans. *Hygiene and Social Science*—Henry I. Bowditch, M. D., Boston. *Medical Biography*—Joseph M. Toner, M. D., Washington. *Medical Education and Medical Institutions*—Prof. N. S. Davis, M. D., Chicago. *Medical Literature*—Prof. L. P. Yandell, Sr., M. D., Louisville. *Mental Hygiene and Medicine*—John P. Gray, M. D., Utica. *Physiology*—Prof. Levin S. Joynes, M.D., Richmond. *Medical Chemistry and Pharmacy*— —— Wormly, M. D., Cincinnati.—*Med & Surg Repr.*, April 24.

"Visitation of God" is the cause of a large number of deaths among the colored folk in Charleston, S. C. It is gratifying to learn that God is on a visit to that region.—*Pacific Med. & Surg. Jour.*, April, 1875.

Costly Revenge.—A man discharged from service by a San Francisco physician wrote a message on the Doctor's slate, which took him a long ride in a storm to discover was a hoax. Court fined the fellow $500.—*Ibid.*

Prizes.—*Electro-Therapeutics* is the subject selected for the prize to be awarded by the Faculty of the Medical College of Virginia at the Commencement next March, for the best essay written by any member of the graduating class.

Dr. S. D. Seelye, Montgomery, Ala., offers a prize for an essay on *Bright's Disease of the Kidney.* [Page 130 of this No.]

Madame Letitia Rattazzi, of the Bonaparte family, several members of which have died of cancer, is soon to establish a hospital for cancer patients. She will offer 5,000 francs as a biennial prize for the best work on the subject of cancer, and 20,000 francs will be awarded to whoever may discover a true cure for the disease.

MORTUARY STATISTICS OF SOUTHERN CITIES FOR MARCH, 1875.

MOBILE.—Small-pox no longer epidemic. Some cases now existing are complicated with diphtheria and scarlatina. Unusually large number of pneumonia and broncho-pneumonia among children, though generally of mild type. Deaths among Creoles are set down among the blacks.

ATLANTA.—Eight cases of small-pox during March; all recovered. The City Council, on March 10th, passed an ordinance requiring all persons to be vaccinated.

LYNCHBURG.—Unknown causes of 9 deaths were certified by Board of Health.

(Compiled from Reports of the several City Boards of Health.)

Cities	RICHMOND, VA.				NORFOLK, VA.				LYNCHB'G, VA.				MOBILE, ALA.				SELMA, ALA.				ATLANTA, GA.			
Health Officers, ...Doctors	J. G. Cabell.				Wm. M. Wilson.				R. S. Payne.				W. D. Bizzell.				John P. Furniss.				E. L. Connally.			
Population	Census Feb., 1874, though estimated at 65, 00.				Estimated.				Estimated.				Census 1870 In addition 1,200 Creoles are estimated				Estimated.				Census 1873, tho' estimate is 35,000.			
	White. 33,452		Colored. 27,213		White. 13,900		Colored. 9,000		White. 7,000		Colored. 7,000		White. 18,115		Colored. 13,919		White. 3,500		Colored. 4 000		White. 18,526		Colored 11,607	
Sex	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M	F.	M.	F.
Number of deaths	28	34	46	40	14	9	11	11	3	4	12	3	24	17	37	30	2	0	1	6	18	11	13	15
Number still-born in addition	9		12		1		1		1		7		2		9						2		5	
Ages. Ages unknown not calculated. Under 1 year	14		28		8		4		...		5		7		10		...		2		3		9	
" 3 years	7		7		1		2		1		2		4		16		....		...		2		1	
" 10 "	2		7		1		4		...		2		3		3		....		1		2		3	
" 20 "	...		5		...		1		...		....		2		5		1		1		...		3	
" 30 "	6		11		3		2		...		1		3		14		...		1		4		5	
" 40 "	3		4		2		2		2		3		9		10		1		...		...		...	
" 50 "	4		5		3		3		2		....		4		3		...		1		8		5	
" 60 "	9		8		...		1		..		1		3		...		...		...		...		...	
" 70 "	10		6		2		1		2		1		2		3		....		...		5		1	
" 80 "	4		3		3		1		....		..		3		2		....		...		5		...	
" 90 "	2		2		...		2		...		...		1		...		...		1		...		...	
" 100 "	...		1		...		...		...		...		...		...		...		...		...		1	
Over 100 "	...		...		...		...		...		...		...		1—106 y.		...		...		...		...	

CAUSES OF DEATH.

Accidents, Suicides, Wounds, &c.	2	1	1	.....	.....	.....	2	2	.....	.....	2	3		
Alcoholism, Delir. Tremens, Intemp'nce	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....		
Apoplexy	1	2	1	.....	.....	.....	1	1	.....	.....	.....	.....		
Ascites, Dropsy, Hydrothorax	.....	1	.....		1	.....	1	1	.....	.....	1	.....		
Asphyxia, Cyanosis.	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	...		
Asthma	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....		
Birth, Premature	.....	3	1	.....	.....	.....	.....	6	.....	1	.....	.....		
Bladder, Ulcer of	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....		
Brain Disease, Cerebritis	.....	1	1	.....	.....	.....	1	.....	.....	.....	1	1		
Bright's Disease	.....	.....	.....	.....	.....	.....	1	1	.....	1	1	1		
Bronchitis, Laryngitis	2	3	.....	.....	.....	.....	.....	1	.....	.....	.....	.....		
Cancer	5	3	.....	1	.....	.....	1	.....	.....	.....	1	.....		
Congestion of Brain, Lungs	3	2	.....	.....	.....	1	.....	.....	.....	.....	.....	.....		
Consumption	6	14	4	1	2	.....	5	7	1	3	9	5		
Convulsions	.....	6	2	.....	.....	.....	3	1	.....	.....	1	.....		
" Puerperal	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....		
Croup, Pseudo-Memb.	1	1	.....	.....	.....	...	.....	.....	.....	.....	2	4		
Diarrhœa & Dysentery	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....		
Diphtheria	2	2	.....	1	.....	.....	2	.....	.....	.....	.....	1		
Emphysema	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....		
Enteritis	1	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....		
Erysipelas	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....		
Fever, Hæmorrhagic Malarial	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....		
" Puerperal	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....		
" Typhoid	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....	1		
Gastritis	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	1		
Hæmaturia	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1		
Hæmorrhage, Uterine, Pulmon., Nasal	.....	2	.....	.....	.....	.....	.....	2	.....	.....	1	.....		
Heart Disease	4	2	.....	.....	.....	.....	3	1	.....	.....	.....	.....		
Hepatitis	.....	1	1	.....	.....	1	.....	.....	.....	.....	2	1		
Inanition, Old Age, &c.	4	6	1	7	.....	.....	1	1	.....	1	.....	.....		
Intussusception	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....		
Meningitis Cereb. Spinal & Tubercular	.....	1	.....	.....	.....	.....	2	1	.....	.....	.....	.....		
Mesenteric Disease	.....	.....	1	.....	.....	2	.....	.....	.....	.....	.....	.....		
Paralysis	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
Pericarditis	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....		
Peritonitis	.....	.....	.....	1	.....	.....	.....	3	.....	.....	.....	1		
Pleurisy	.....	1	.....	.....	.....	.....	.....	.....	1	.....	7	7		
Pneumonia	12	9	6	5	.....	2	6	3	1	.....	.....	.....		
Pyæmia, Septicæmia	1	.....	.....	.....	.....	.....	...	1	.....	.....	.....	1		
Rheumatism	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	.....	.....		
Scrofula, Marasmus	1	2	.....	.....	.....	.....	.....	2	.....	.....	.....	.....		
Small-pox	.....	.....	.....	.....	.....	.....	6	30	.....	.....	.....	.....		
Syphilis	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
Teething	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....		
Tetanus	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....		
Thrush	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1		
Trismus Nascentium	.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....		
Unknown	5	15	.....	.....	.....	9	.....	.....	.....	.....	.....	.....		
Whooping Cough	1	.....	.....	1	.....	1	.....	.....	.....	.....	1	1		

Obituary Record.

Dr. Francis Condie, the well known author of *Practical Treatise on Diseases of Children*, and other works, died at his home in Delaware (to which he removed when he retired from practice in Philadelphia) April 1st, 1875.

Dr. C. M. Hubbard died at his home in James City Co., Va., April 22, 1875. He was the assistant physician at the Eastern Lunatic Asylum, Va., during the superintendency of Dr. R. M. Garrett.

Dr. Paul C. Lee, of Montgomery, Ala., one of the originators and President of the local Medical and Surgical Society, died at his residence March 13th, 1875. "Endowed by nature with a kind and generous heart, cultivated and learned in his profession, he was respected by all who knew him."

Dr. J. C. Norris (Alabama), a former contributor to the *Charleston Med. Jour. & Rev.*, and well known for an essay on "Malarial Diseases" and other publications on Sanitary Science, is dead. He was a native of Virginia, and a laborious professional worker.

Dr. Prior G. Fore, died at his home in Cincinnati, March 22, 1875.

A Case of Fatal Conium Poisoning has recently been exciting much comment in New York. A gentleman, æt. 65, took, for the relief of neuralgia, on the prescription of Drs. R. Agnew and D. Webster, three doses of 40, and one of 60 minims of the fluid extract of the *leaves*, at intervals of half hour, without, however, apparent effect. After four hours more, he took at like intervals three doses (50 minims each—not unusual doses—) of fluid extract of the *seed*, manufactured by Dr. E. R. Squibb. The patient died suddenly half hour after taking the third dose.

Mortuary Statistics of the District of Columbia.—The statistics of the Board of Health for last week in March shows the rate of mortality of whites 23.16 per 1,000 per annum; of the colored, 65 per 1,000 for the same period.

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Original Communications.

ART. I.—*Remarks on the Comparative Mortality of the White and Colored Populations of Richmond.* By L. S. JOYNES, M. D., Secretary of the Virginia State Board of Health, etc. (Read before the Richmond Academy of Medicine, March 18, 1875.)

At a recent meeting of the Academy, a statement was submitted by the President, Dr. J. G. Cabell, who is also President of the Richmond Board of Health, in relation to the comparative death-rate of Richmond, and of other American cities, for the year 1874. In commenting upon this statement, the point was raised by members that the death-rate of Richmond could not be fairly compared with that of any Northern city, because of her large colored population, and their excessive mortality—the result, not only of their improvidence and ignorance, but also, in a large degree, of the *influence of race.* In order to make a fair comparison, and determine the chances of life in Richmond for a *white man* seeking a residence there, we ought to *exclude the negroes from the computation.* The excessive proportion of *still-births* among the colored population was also referred to with special emphasis.

In reply to these comments, I expressed a doubt whether a comparison with Northern cities in respect of sanitary condition and death-rate could be considered unfair to Richmond, merely because of her large colored population, inasmuch as this is simply the *lowest or worst class of her population, hygienically considered*—the one most unfavorably situated with regard to those influences and surroundings which affect human health for good

or ill—and corresponds to the class lowest in this respect in other cities. It may be argued, with reason, that we have no more right to exclude the negroes in the computation of our death-rate than New York, London and Paris have to exclude the degraded and destitute classes which are chargeable with the largest proportional share of their mortality. The mortality is greater among the negroes here, *not because they are negroes*, but because in respect of habitations, clothing, fuel, food, air, domestic and personal habits, occupations, and other circumstances influencing health, they are, as a general thing, much worse off than the white population around them, whether such inferior conditions be the results of their own improvidence and negligence, or of causes beyond their control. When such palpable and sufficient causes of disproportionate sickness and mortality exist, it seems hardly philosophical to ascribe these to *difference of race*.

I also expressed the opinion that the excess of still-births among the colored population, great as it undoubtedly is, admits of rational explanation, without setting it down to any supposed inherent defects of physical organization or vital power in that population.

The object of the present paper is to adduce some evidence in support of the views thus briefly expressed, and so little in accord, as it would seem, with those of many members of the Academy. I may, perhaps, be pardoned for venturing at the outset to suggest that the views which I am undertaking to combat are probably in no small degree the offspring of preconceived notions, early imbibed, with regard to the inferiority of the negro race. Accepting without question the idea that the negro is inferior to the white man in intellectual capacity and moral endowments, we have (quite naturally, perhaps) coupled with this the belief that he is inferior in physical organization and vital force, and in the power to resist disease and death. Leaving out of view the question of the common origin of the varieties or races of mankind, and that of the comparative mental and moral attributes of the white and negro races, the belief just referred to should be discussed on its own independent merits, and should not be adopted by men of science without the most satisfactory proof. Let it be granted that the negro is not the equal of the

white man in intellect and *morale*—it by no means follows that he is essentially inferior to him in physical organization, and in his stock of that vital force which preserves and continues the species, and resists destructive agencies.

Comparative Longevity and Reproductive Power.—Certainly, so far as we have evidence, the colored race, in a congenial climate, is fully equal to the white in *longevity*—that is, the capability of attaining the most advanced age—and in *reproductive power*. In Richmond, during the four years 1871–74, of persons dying at the age of 70 years and upwards (according to the annual reports of the Board of Health), there were 291 colored to 257 white, although the white population exceeds the colored in the proportion of about 11 to 9.

In the official volume of *Vital Statistics of the United States*, compiled from the census returns of 1870, is published a table exhibiting the number of persons then living at the age of 80 years and upwards, from which it appears that there were 372 such persons in every 100,000 of the white population, and 499 in every 100,000 of the colored population.

As to *fecundity:* During the four years 1871–74, the births among the whites in the city of Richmond numbered one in 33.95 of that population. Among the colored, the ratio was 1 in 32.37. This statement refers only to births of *living* children. If *still-births* were included, the difference of ratio would be still more decidedly in favor of the colored population.

In so far, therefore, as longevity and reproductive power may be taken as measures of vital force, the comparison is by no means unfavorable to the negro race.

Increase of the Colored Population.—A belief appears to be entertained by many (and that not only by the ignorant and thoughtless, but by grave and intelligent persons, among whom may be numbered members of this Academy) that the African race in this country is gradually diminishing in numbers, and is doomed to ultimate extinction at a day perhaps not very remote. What degree of faith should be put in such prognostications will appear from the fact that the increase of the colored population of the United States from 1860 to 1870, according to the official census, was over 438,000, being at the rate of nearly 10 *per cent.* This, it is true, was a smaller ratio of increase than that of the

white population during the same period, and less also than that of the colored population during the preceding decade. But it was considerably larger than the ordinary ratio of increase in France, and very nearly equal to that of Great Britain, which, during the ten years 1851–61, was a trifle over 11 *per cent.* And with reference to the increase of the white population of the United States, the immense effect of *immigration* must be borne in mind. During the ten years ending with 1870, the addition to the population from this source, allowing for a very moderate rate of increase among the immigrants themselves after their arrival, was nearly, if not quite, 2,500,000; and this addition was exclusively (with, perhaps, insignificant exceptions) to the white population. Making the most liberal estimate of the greater destruction of life among the whites consequent upon the war, there still remains a very heavy balance in their favor arising from immigration; and, if due account be taken of this, it will be found that the difference in the ratio of increase of the white and colored populations, respectively, is very much less than is generally supposed.

It is not to be denied that a considerable decrease has taken place in the colored population of *Virginia;* and it is probably this which has given rise with many to the idea of a general decrease. The colored population of Virginia and West Virginia together in 1870, was 18,086 less than that of Virginia in 1860—a diminution of about $3\frac{1}{3}$ *per cent.* But when we seek for the reason of this diminution, we find that the colored population of the District of Columbia increased during the same period 29,088—equal to more than 200 *per cent.* of its numbers in 1860—and that of the States north of Mason and Dixon's line underwent an increase considerably beyond the general and natural rate—that is, beyond what could be probably accounted for by the excess of births over deaths. When we consider these facts, and the further well known fact that many negroes went from Virginia to the Cotton States after the war in quest of more profitable employment, it is easy to see that the decline of the colored population of Virginia has been, in fact, due to its *depletion by emigration.*

Again: The colored population of Kentucky decreased nearly 14,000, or about 6 *per cent.*, from 1860 to 1870; but that of the

States on the north side of the Ohio river increased during the same decade 61,000—in fact, more than doubled its numbers. In like manner, while the colored population of Missouri suffered a reduction of a few hundreds, that of the neighboring States of Iowa and Kansas exhibited a very great increase.

With the exception of the three border States mentioned, every Southern State exhibited a greater or less *increase* in the colored population, and in some instances this increase was very large. Thus, in Georgia, it amounted to 17 *per cent.*, in Texas to 38, and in Florida to 46 *per cent.* It is evident, therefore, that there has been a *re-distribution* to a very considerable extent of the colored population, by migration from one State and section to another, but *no decrease* in the aggregate—on the contrary, a large increase.

Comparative Mortality from Different Diseases.—To return to the relative liability to disease, and the relative mortality of the white and colored races: While it is not maintained that the two races, as we find them side by side in this country, are entirely alike in their susceptibility to all the causes of disease, or that they are equally liable to every form of disease, it appears by no means certain that, when the account is squared, the balance will be found much, if at all, against the negro race—at least in a congenial climate like that of Virginia and the more Southern States. If they are less adapted to residence in a cold climate, and less able to endure the rigors of winter, than the white race, on the other hand they bear the heats of summer better, and dwell in the semi-tropical climate of the Gulf States with less inconvenience and danger.

They are less liable to be attacked by *yellow fever*, and the fatality of its attacks is much less among them. According to general testimony, they are less subject to the influence of *malaria*, and can live and labor on the cotton, rice and sugar plantations of the South with far less danger than the whites; though it must be admitted that there is some conflict of opinion and evidence on this subject. There is strong evidence to justify the belief that *diphtheria* is a less frequent, or, at least, a less fatal disease among the negroes than among the whites. In Richmond, during the four years 1871–74, there were 109 deaths by diphtheria among the whites, and only 24 among the

colored population, while (as already stated) the numbers of these two classes of the population are nearly in the proportion of 11 to 9. The mortality statistics of the United States census for 1870 give the number of deaths by this disease during the preceding twelve months as follows: Whites, 5,587; colored, 439. Comparing these figures with the total population of each race, we find that the ratio of mortality from diphtheria was *nearly twice as great* among the whites as among the colored population.

With regard to *scarlatina*, the difference is more striking still. In Richmond, during the last four years, the deaths from this disease have been, whites 10; colored 0. In the United States, during the year embraced in the census of 1870, they were as follows: Whites, 19,099; colored, 289. Relatively to population, the mortality among the whites was about *ten times as great* as among the blacks. This enormous disproportion can hardly be explained by the possible failure to recognize the disease in the negro, especially when we find that the census credits the colored population with a mortality from *measles* more than twice as great in proportion as that of the whites.

Cholera infantum is another disease which observation shows to be less fatal among the colored race. In Richmond, during each of the last four years, the number of deaths from this cause among the white population exceeded the number among the colored by a ratio considerably greater than the relative excess of white population; and for the four years together, the deaths were, whites, 255; colored, 145. The mortality among the white, therefore, was nearly 50 *per cent.* greater than it should have been, according to the relative numbers of the two populations. The testimony of the census of 1870, for the country at large, is substantially to the same effect.

Not to mention other causes of death which seem, from the statistical evidence at command, to be less destructive to the blacks, it is interesting to note how much less liable they are to *insanity* than the whites. According to the census of 1870, the number of insane among the white population of the United States was 1 in every 1,374—among the colored, 1 in 2,794. In the State of Virginia, the proportions were 1 in 838 whites, and 1 in 2,003 colored.

On the other hand, various diseases are relatively more de-

structive to the negro race, among which (not to go through the whole list) may be specially mentioned *pneumonia*, and other diseases of the respiratory system, and the *tubercular* diseases in general. The greater liability of the negro to the latter class of diseases, has attracted the special attention of medical men, many of whom have strongly insisted that such greater liability is to be referred to the influence of race—that the negro more frequently falls a victim to pulmonary consumption and other tubercular diseases, *because he is a negro.* In a Northern climate, wholly uncongenial to the negro, we can hardly refuse to admit the influence of race in increasing the destructiveness of this class of diseases. But in a congenial climate, such as that of Lower Virginia, the difference of mortality in the two races from this source may be sufficiently explained by reference to adequate causes, irre pective of the influence of race.

In Richmond, during the four years 1871–74, the deaths from pulmonary consumption among the white population numbered 324, being 10.17 *per cent.* of the deaths from all causes; while among the colored population they numbered 528, or 14.24 per cent. of the total mortality. This is certainly a heavy disproportion; but it is not greater than may be reasonably accounted for by the unfavorable hygienic conditions by which the negroes living in the city are, as a class, surrounded, and which are precisely those which everywhere conduce most effectively to the development of scrofulous and tuberculous disease. White people placed in the same conditions would no doubt succumb to their influence in equal proportions. In truth of this, it need only be stated that the researches of the distinguished French statist, Marc d' Espine, upon the mortality of the different classes of society, have developed the fact that, in that country, while only 68 out of every 1,000 deaths among the *rich* are due to tubercular disease, 233 deaths out of every 1,000 among the *poor* are due to the same cause—that is to say, nearly 3½ times as many. This is a much greater disproportion than that which obtains (as above shown) between the white and colored populations of Richmond.

Of course, it is not meant to assert that all of the negro population of Richmond are surrounded by bad sanitary conditions —that poverty, filth, exposure, unwholesome dwellings, preca-

rious subsistence, improvident and heedless habits of living and laxity of morals exert their baleful influences on them alone, while all the whites are in the enjoyment of wealth, comfort and well-regulated lives, with their attendant sanitary advantages; but that there is a vast difference between the two classes of the population, taken in the average, as it respects the conditions and surroundings which affect human health, no candid person will for a moment deny.

It is the conviction of some intelligent and thinking observers that, previously to emancipation, when their physical well-being was better secured, and they were a well-fed, well-clad and contented class, consumption was a comparatively rare disease among the negroes of Virginia; but that since the unfortunate changes in their condition attendant upon freedom, they have suffered a material impairment of health and vigor, and consumption has become as frequent among them as it was formerly rare. There are no reliable statistics at command which may enable us to test the correctness of this belief. But, *if it be true*, no more conclusive argument could be adduced in favor of the view here maintained, that the present undue mortality from tubercular disease among the negroes is not due to the influence of race, but of unfavorable sanitary conditions. For since the war, *it is not the race of the negro that has changed, but only the conditions and circumstances by which he is surrounded.*

General Mortality and Death-rate.—Passing from particular causes of death to the general mortality, we learn from the annual reports of the Board of Health that the deaths in Richmond during the last four years—these being the only years in which the deaths of whites and negroes have been recorded separately—were as follows:

	White.	Colored.	Total.
1871	668	884	1,552
1872	814	900	1,714
1873	977	1,060	2,037
1874	727	864	1,591

The population of Richmond in 1870 was as follows:

White.	Colored.	Total.
27,928	23,110	51,038

In January, 1874, according to a census taken by order of the City Council, it was as follows:

White.	Colored.	Total.
33,492	27,213	60,705

Carefully calculating from these data the population for each successive year, and comparing with it the annual mortality, we arrive at the conclusion that the mean annual ratio of deaths during the four years 1871–74 was, in the white population, very nearly 25 per 1,000, or 1 in 40; in the colored population, 35.74 per 1,000, or about 1 in 28.

Remarkable as this difference is, it is quite capable of being explained by the influence of circumstances already referred to, to which may be added the improper feeding and management of young children by ignorant negro mothers, and in not a few cases the want of proper nursing and diet, and of timely medical attention in sickness. That differences quite as great, or even greater, may be produced by such influences among different classes of the same race and nationality, and that we are therefore, under no necessity of appealing to diversity of race for an explanation of the facts in the present instance, is abundantly proved by authentic records of mortality in other communities. In every country, and every city, where careful registers have been kept, it has been found that the favorable influences surrounding the better classes of the population diminish the amount of disease and mortality, and prolong the duration of life; while poverty, with its attendant privations and hardships, and wilful or enforced disregard of the laws of health, lowers the vital energy, curtails the expectation of life, and swells the harvest of death.

A comparison of the mortality in the better, and in the poorer and less cleanly quarters of London and Paris, reveals differences fully as striking as those which have been indicated between the two classes of the population of Richmond. On this side of the Atlantic, the city of Philadelphia furnishes emphatic evidence of the same purport—an examination of the mortuary report for a series of years establishing the fact that the mortality in certain wards is twice as great as in others. In the year 1873, for example, the mortality ranged in the different wards from the very low ratio of 1 in 72 of the population to the relatively high one of 1 in 31. As to the causes of this vast difference, let the Board of Health testify. After enumerating the ten wards which "have long been rated among the most unhealthy in the city," they state, in explanation of the fact, that

"they are badly paved and imperfectly drained, and deficient in well-ordered sanitary arrangements. They contain overcrowded and badly ventilated localities, inhabited by people morally and physically depraved, who set at defiance every sanitary law, and refuse all protective measures directed for the preservation of their health and lives."

Evidence still more significant is afforded by our great metropolis, New York, which enjoys the distinction of being the most over-crowded city in the world, and which exhibits wealth and penury, splendor and misery, in such close juxtaposition, and in such vivid features of contrast. According to investigations instituted by the Board of Health in 1870, very nearly one-half (over 49 *per cent.*) of the population of New York live in *tenement houses*—that is to say, houses containing more than three families, living independently of each other, or more than two families on a floor. Some of these houses contain two or three hundred dwellers, packed story above story, with very insufficient space and ventilation.

Is the white race proof against this over-crowding and its attendant evils, any more than the negro would be? Hear the story of the death-registers: In 1868, the deaths in the tenement-houses, and in the hospitals and other charitable institutions (the inmates of which are mainly derived from the tenement-houses) constituted 75.79 *per cent.* of the total mortality of the city. In other words, this smaller half of the population of New York furnished *more than three times* as many deaths as the larger half, who lived in private dwellings.

The strenuous and persistent efforts of the Board of Health, backed by judicious legislation, have wrought important ameliorations in the hygienic condition of these people; but still, in 1872, the tenement-houses, and the public institutions which they supply with inmates, furnished over 66 *per cent.* of the total mortality—say *two-thirds*—and the private dwellings less than 34 *per cent.* Here, as in Philadelphia, we observe a greater disproportion than between the whites and blacks in Richmond.

For the causes of this excessive mortality, apart from the mere over-crowding, let me quote a few words from a report of the Board of Health, detailing the observations of their Sanitary Committee:

"In whatever part of the city the Committee visited these establishments, with a few exceptions hereafter to be noticed, the same conditions existed. The little colony exhibited in their rooms, and in the areas around their dwellings, extreme want of care. The street in front of the place was reeking with slops and garbage; the alleys and passage-ways were foul with excrements; the court was imperfectly paved, wet, and covered with domestic refuse; the privies, located in a close court, between the rear and front houses, were dilapidated, and gave out volumes of noisome odors, which filled the whole area, and were diffused through all the rooms opening upon it; and the halls and apartments of the wretched occupants were close, unventilated and unclean."

Again, the Sanitary Superintendent says:

"It must be borne in mind that the classes of people that are crowded into the most densely populated houses and blocks are, with rare exceptions, so poor and ignorant, or so uncleanly in their habits, that they would breed filth and sickness even in a prairie-cabin, unless kept under some kind of sanitary inspection."

Could anything worse be said of the negro, whose stupidity, improvidence and uncleanliness have been so strongly portrayed?

I respectfully submit that ample evidence has now been presented that *the white race is no more above the influence of bad sanitary conditions than the negro, and is capable of exhibiting fully as high a death-rate when the necessary concurrence of injurious surroundings exists;* so that the high comparative mortality of the colored population in Richmond cannot reasonably be ascribed to the influence of race as its chief factor, unless it be maintained that this is the cause of the negro's poverty, adverse social and domestic conditions, and thoughtless disregard of the laws of health—in which respects, however, as we have seen, the negro falls no farther below the standard of well being than great numbers of the "superior race."

The comparison between the white and colored elements in our population is very similar to that between the Americans and Chinese in San Francisco. During the twelve months ending June 30, 1874, the deaths among the American population of that city are stated to have been at the rate of 19.8 per 1,000, while among the Chinese the rate was 32.1 per 1,000. But are we thence necessarily to infer that the Mongolian race is of es-

sentially inferior vital *stamina* to the Caucassian—less able, *because of race*, to cope with the causes of disease and bear up under its assaults? By no means. The difference is readily and rationally accounted for by the over-crowded, ill-drained, and filthy condition of the quarter of the city which they occupy, by the contracted and fetid dens into which they are thickly crammed, and by their foul and vicious habits of life. But these unsanitary conditions, bad as they are, do not produce among the degraded Chinamen as great an excess of mortality as we have already seen to exist among the tenement-house population of the city of New York.

Let me now refer to a case which presents the other side of the picture. It has been proved from the official registers of Prussia and France that the sanitary *status* of the Jews in those countries is superior to that of the populations among which they live. They exhibit a lower death-rate, and a greater mean duration of life. Are we, therefore, to believe that the Semitic branch of the Caucasian stock is endowed with a higher vitality than the Indo-European? No; the facts do not require any such admission. The secret of the matter is, that the Jewish population, as a mass, are in *better hygienic conditions* than the mass of the Prussian and French people. They are mostly engaged in commercial and financial pursuits; some in literary and professional occupations. Few of them are mere menials and laborers, and a very small proportion are sunk in the depths of poverty and wretchedness which are the life-long destiny of so many of the inhabitants of European countries.

Besides, if we are entitled to speak from the results of observation in this country, I think it may be affirmed that the Jews, as a general thing, lead more regular lives, and are more careful of their health, than the great majority of individuals composing the populations among which they are scattered. Their great law-giver, more than three thousand years ago, with a wonderful and far-seeing wisdom, made hygienic rules and observances a part of the national religion, and who can doubt that his ordinances, transmitted and held sacred through centuries, have done much to elevate the standard of health and life among his people, amid all the vicissitudes of good and evil fortune which have marked their history?

With regard to the mortality of our colored population in Richmond, it is worthy of note that it is most disproportionate during the early years of life, when the influence of causes tending to impair nutrition and depress the vital powers is most sensibly felt. Thus, under the age of 5 years, while the deaths among the whites amount to 42.12 *per cent.* of their total mortality, among the colored population they amount to 47.08 *per cent.* of the whole. But this excess continues during the whole period of growth; for no less than 56.58 *per cent.* of the deaths among the colored take place under 20 years of age, against 49.24 *per cent.* among the whites. After the age of 20, the excess of mortality, though it does not disappear, becomes comparatively small.

Still-Births.—The excess of still-births among the colored population is truly enormous, as the following statement of the number of children born alive and still-born in Richmond during the last four years will show:

	Live-Births.	Still-Births
White	3,825	208
Colored	3,265	450

Thus, it appears that while among the whites there was 1 child still-born to every 18 born alive, among the colored there was 1 to every 7.

There are several obvious causes which may be specified as occurring to produce this great disproportion, and which will suffice to account for the facts, without the need of any questionable assumption as to the influence of "race."

First. Among women engaged in laborious and menial occupations, a much greater number of abortions and still-births will be likely to occur from *accidental* causes—such as falls, blows, strains of the abdominal muscles, etc.—than among women leading easier and quieter lives.

Secondly. Wherever the general standard of health is lower, and the death-rate higher, there will be a greater chance of the fœtus dying *in utero*, as the result of disease in the mother reacting upon the fœtus; and it is quite possible that fatal disease may be induced in the fœtus by unwholesome surroundings of the mother (bad air, etc.), even though the latter escape any serious attack of disease.

Thirdly. Syphilis in one or the other parent is probably now a more frequent cause of the death of the fœtus among negroes than among whites.

Fourthly. When girls commence the office of child-bearing prematurely, before the full development of the pelvis and the soft parts concerned in parturition,, a larger proportion of the children of the first labor will be born dead than when women reach full maturity before becoming mothers; and it is well known that premature child-bearing is far more common among the negroes than among the whites.

Fifthly. A very decided influence upon the proportion of still-births results from the fact that the great majority of negro women are attended in labor by incompetent midwives, wholly unskilled in the management of the difficulties and complications of labor, and ignorant even of the means of preventing the loss of the child from mere delay in its expulsion.

Sixthly. There is strong reason for the belief that a certain, perhaps a considerable, proportion of the still-births reported are not still-births at all, but cases of *infanticide*, whether by the infliction of actual violence, or by the omission of the necessary care of the new-born child.

In conclusion, it may be remarked that everything relating to the vital statistics of our colored population is of deep interest, not only to the physician, but to the political economist and statesman, and, indeed, to every intelligent citizen. Notwithstanding the prognostications of those who assure us that the African race in the United States cannot long exist in a state of freedom, and are doomed like the aboriginal red men, to early extinction, it is certain that they will form a large integral element of the population of our Southern States for ages yet to come—that they will still, in the future as in the past, till our fields, and perform the necessary service of our households. It is, therefore, no less the dictate of interest than of humanity that we should strive to develop both their physical and mental capacities to the highest attainable point of usefulness; and if, recognizing the fact that the same hygienic influences that affect us for good or ill, affect them in like manner, we shall be able, by properly devised sanitary measures, as well as by education and example, to lessen their mortality, and elevate the standard

of health among them, we shall perform a most useful service not only to them, but to ourselves, and promote the permanent welfare of our country.

ART. II.—*Opium-Poisoning.* By ANDREW H. SMITH, M. D., Physician to St. Luke's Hospital; Surgeon to Throat Department of Manhattan Eye and Ear Hospital, New York.

In these remarks, I shall confine myself to the consideration of the grade of opium-poisoning which threatens the life of the patient, or, at least, causes solicitude to the practitioner, passing by those minor manifestations of toxic influence which, though strictly embraced in the title of my paper, do not excite alarm or call for special treatment for their removal.

The *symptoms* of opium-poisoning are sometimes in themselves insufficient for an absolute diagnosis; yet, they are generally so distinctive as, with the history of the case, if this can be obtained, to leave very little room for error. Where a poisonous dose of opium has been taken into the system, the stage of excitement observable when smaller doses begin to act, is of very short duration, or entirely absent. Giddiness and oppression are complained of, accompanied or soon followed by extreme drowsiness. At this stage, nausea and vomiting may occur. If the patient is permited to sleep, the sleep deepens into profound unconsciousness. The face is pale and dusky; the lips more or less livid; the skin sometimes covered with cold perspiration. The pulse, strong and bounding at first from the stimulating effect of the drug, becomes slow and full; later on, small, feeble and thready. The breathing is slow, and sometimes stertorous. The pupils are closely contracted, and insensible to light. The power of swallowing is gradually lost, mucus accumulates in the throat and in the air passages; the breathing becomes more and more infrequent, and at last ceases—death taking place generally from asphyxia, sometimes from collapse. Convulsions may occur towards the last, especially in children.

Such being a general picture of opium-poisoning, let us now examine some of its features more in detail: The intellect is usually almost wholly dormant, the patient being sunk in a heavy sleep, from which he may perhaps be aroused by shaking him

roughly or shouting in his ear; but he immediately relapses into his former condition when the excitation ceases. His answers when aroused are usually quite intelligent, showing that the mental functions are *overpowered* rather than *deranged*. In a few instances, however, active delirium occurs.

The explanation of these head symptoms is to be found partly in the direct action of the drug upon the cerebral tissue, and partly in the pressure upon the brain, which results from the dilation of the cerebral vessels. The former seems to be but a part of the general paralysis of the brain and nervous system, which is characteristic of the action of the drug, while the latter is a secondary effect of the same paralysis of it affecting the vasomotor nerves.

One of the most constant symptoms of opium narcosis is contraction of the pupil. This results from the action of the drug upon the nerve centres governing the pupil, and not from the local effect upon the terminal nerve filaments or upon the muscular tissue of the iris. This is shown by the fact that opium, unlike belladonna and the mydriatics generally, does not affect the pupil when locally applied. In this respect it differs, too, from the calabar bean. This symptom is of great value in a diagnostic point of view. The contraction of the pupils is usually symmetrical, differing in this from the contraction produced by irritation of the brain or its membranes, which seldom affects both sides alike. Still, Dr. Wood mentions a case of opium-poisoning in which one pupil was contracted and the other dilated; and on the other hand, it sometimes happens that a source of irritation at the base of the brain is so centrally located as to affect both pupils equally. Contraction of the pupil should not, therefore, be allowed too great weight in diagnosis. While always suggesting opium-poisoning, it should not be accepted as indicating that condition unless other symptoms point to a like conclusion. It is to be borne in mind, too, that in the very last stage, as death is approaching, the pupils generally become widely dilated.

The respiration is very generally reduced in frequency; so that the general opinion seems to be that opium always destroys life by interfering with and at last suspending respiration. The classical picture of opium-poisoning represents the comatose and

cyanotic patient as breathing more and more slowly until only two or three sighing respirations occur in the minute, and as the end approaches, even these intervals become more and more protracted, until at last a breath is drawn to which there is no successor. We are told that the drug blunts the sensibility of the respiratory centres so that more and more carbonic acid has to accumulate in the blood before they become aware, as it were, of its presence; and in this connection the man who knows only three words of French inevitably brings them to the front, and tells us that the patient feels less and less the "*besoin de respirer.*"

So general is this effect of opium upon the respiration, that it is received on all sides as the criterion of danger where opium is being given in repeated doses, as in the treatment of peritonitis. Prof. Clark, the author of this treatment, in one of his earliest papers on the subject, uses the following language: "The respiration seems to be the most certain indication of danger. I have not aimed to reduce it below 12 in the minute; yet, in almost every case it has fallen once or twice in the course of the treatment as low as 7, or sometimes to 5." The indications thus sketched by Dr. Clark have been followed by the profession in general, and it is now the accepted rule to repeat the dose until the respiration comes down to 12, unless the leading symptoms are sooner alleviated.

Now, while this practice is undoubtedly safe in the vast majority of cases, the most dangerous narcotism may happen nevertheless, while the respiration is at or near the normal figure. One such case has come under my own observation; another occurred recently at St. Luke's Hospital, and a third at Bellevue. Doubtless, if the rate of respiration were always noted in reports of cases of opium-poisoning, we should find that such instances are not very rare.

The fact that such cases may occur, renders it extremely important that absolute reliance should not be placed upon the respiration to sound the note of warning as danger approaches. The contraction of the pupil and the effect upon the intellect will serve to put the practitioner upon his guard.

Before the respiration becomes greatly reduced in frequency, it is sometimes stertorous, but as the respiratory centres reach

an extreme degree of insensibility, the breathing becomes so superficial that the volume of air is not sufficient to cause the vibration of the palate and cheeks, which gives rise to stertor.

The skin is usually pale and at the same time livid or cyanotic in proportion to the intensity of the narcotism. This lividity is especially marked in the lips, which, in extreme cases, are of a dark blue or purple color. The skin is often covered by a profuse clammy perspiration, due, doubtless, to the relaxation of the cutaneous vessels. The temperature becomes lower than natural as the coma deepens. The pulse is for a short time quickened, but it soon becomes slower and fuller than normal. As death approaches, it becomes frequent, small and feeble. The lowering of the pulse is much more striking in cases in which it had previously been high from the effect of disease. Thus, in peritonitis, we often see the pulse fall from 120 to 90 or 100 in a few hours from the use of what are now considered medicinal doses of morphia. This change in the pulse, however, is more tardy than the corresponding change in the respiration.

The *post mortem* appearances are, for the most part, negative. It is very rare, even where enormous doses have been swallowed, that the stomach appears otherwise than healthy. When the drug has been taken in a liquid form, it is very seldom that any traces of it can be found in the stomach, even though the patient may not have vomited. If in the solid form, some of it may resist absorption for several hours, and thus be found in the stomach after death. When death has been caused by laudanum, the alcohol alone may produce a certain amount of hyperæmia of the gastric mucous membrane.

The lungs and heart are generally found in a normal condition, but sometimes the lungs are engorged, and the right side of the heart filled with dark blood. The brain is generally the seat of decided lesions. The veins are gorged with blood, but extravasations of blood are very rare. Serum is sometimes found in the ventricles or between the membranes. The convolutions are often flattened by the pressure which the fullness of the vessels occasions; and this fullness sometimes extends to the vessels of the scalp. But, on the other hand, in rare instances, there is complete absence of congestion in or about the head.

Thus, we see that there are no specific lesions left by opium-poisoning. Cerebral congestion is very generally present; but it may arise from many other causes, and would almost certainly be found in any case in which the symptoms had resembled narcotism by opium. The autopsy will, therefore, seldom throw light upon a doubtful case, unless the presence of the poison can be shown by chemical tests.

The pathology of opium-poisoning, though not fully settled, probably embraces, as a rule, the following points: The respiratory nerve centres are paralyzed more or less completely. That the paralysis is not of the nerves or muscles is shown by action of electricity in exciting respiration. The origin of the third nerve is irritated, producing contraction of the pupil. That this contraction does not depend upon paralysis of the sympathetic is proved by the fact that irritating the sympathetic in the neck causes dilatation of the pupil, showing that the normal action of the nerve remains. The inhibitory fibres of the vagus remain active, as is shown by the arrest of the heart's action when the trunk of the nerve is stimulated. Harley even thinks that there is irritation of the vagus, which aids in producing the slowness of the cardiac movements.

The vaso-motor nerves are paralyzed, and hence there is a general dilatation of the vessels with lowering of vascular tension. It is probable that this condition existing in the encephalon and causing congestion, and therefore pressure upon the brain aids in producing the cerebral symptoms, as before mentioned.

The *diagnosis* of opium-poisoning from apoplexy is sometimes very difficult, especially in those cases in which a person is found in a comatose condition and the history of the seizure cannot be obtained. In general, however, we may remark the following differences: In apoplexy we rarely find the pupils alike. If they are contracted, it is in different degrees, or one may be contracted and the other dilated. In opium-poisoning both are contracted alike. In apoplexy, when it has reached its height, there is no possibility of rousing the patient, but yet, in most cases, reflex movements may be excited. In opium-poisoning, the patient can generally be roused for a moment, but if this is impossible then reflex movements likewise cannot be induced. The finger may be thrust into the fauces without pro-

ducing retching, or the skin may be pricked or pinched, and the limb will not be withdrawn. In apoplexy, there may be occasional movements of the arm and leg of one side only, or if this be not the case, it will be found that the arm and leg are more completely flaccid on one side than on the other, showing the presence of hemiplegia. In opium-poisoning, no such difference will be observable. In apoplexy, the breathing is slow and generally stertorous; in opium-poisoning, still slower, and generally not stertorous. In apoplexy, the face is usually flushed; in opium-poisoning, it is at once pale and livid. In apoplexy, there is strong pulsation of the carotids; in opium-poisoning this is not observed.

We may add to these that in many cases of opium-poisoning the odor of the drug may be detected in the breath and in the vomited matters.

In compression of the brain from injury we have nearly the same distinctions as above, and in addition usually some external evidences of violence.

Uræmic coma sometimes comes on suddenly without previous dropsy, and has then many of the features of opium-poisoning; but it lacks the characteristic pupil, and the urine contains albumen or casts or both.

Alcoholic intoxication may be confounded with opium-poisoning; but in it the pupils are not contracted, and the breath generally smells strongly of alcohol. The mental condition, too, is different. The drunken man, if roused, will babble incoherently, while the man narcotized with opium talks rationally so long as he can be kept awake. Moreover, drunkenness is promptly lessened or dissipated by a cold douche or other violent means of excitation. These points will generally suffice for a diagnosis; but the possibility of the two conditions co-existing must not be lost sight of. The misery incident to intemperance is not unfrequently the cause of suicide; and opium is more likely than any other to be the agent employed.

The prognosis in opium-poisoning is extremely favorable if efficient treatment is employed. Of these patients more than any others we may say "while life remains there is hope." Persons have been rescued after the respiration had fallen as low as one in two minutes. In other cases, respiration is stated to have

been scarcely perceptible. Persons not accustomed to the use of opium have recovered after taking 5, 6 and even 8 ounces of laudanum, and that, too, after time enough had elapsed to justify the supposition that complete absorption had taken place. While a sign of life remains, efforts at resuscitation should not be relaxed.

Opium is seldom administered as a poison with felonious intent. A sufficient dose to produce death could hardly be given without the victim's knowledge, unless under the guise of a medicine; and the effects are so obvious and so well known that they would immediately excite suspicion. But as an instrument of suicide, it is more frequently chosen than any other drug. The painlessness of the death which it occasions is a sufficient explanation of this preference. Opium-poisoning occurs very frequently also from its use as a medicine. Aside from the cases in which an excessive dose is given by mistake or accident, and those in which, from an idiosyncracy of the patient a usual dose produces an unusual effect, poisoning is peculiarly liable to occur from opium for the reason that the very conditions which require its use are themselves a protection against its action, and thus, when its therapeutic effect is obtained, this protection is withdrawn, and the system is left a prey to its toxic influence. A person in severe pain, or under great cerebral excitement, will bear an amount of opium which, in the absence of these conditions, would be promptly fatal. And if the pain or excitement is overcome, the system is at once deprived of its protection, and consequently, if more of the drug be given or more absorbed from the stomach, poisoning will result. In this way is to be explained the sudden occurrence of narcotism when the medicine was having apparently but little effect.

The treatment of opium-poisoning may be embraced under the following heads:

Evacuation of the stomach.

Administration of certain drugs which are in some degree antagonistic to opium.

Efforts to arouse the nervous system.

Efforts to maintain respiration.

Efforts to keep up the circulation and temperature.

To meet the first of these indications, we have emetics and

the stomach-pump. Of emetics, there is one which is almost always at hand, and is admirably adapted for the purpose. This is mustard. Alum, too, is found in nearly every house, and is very efficient. Sulphate of zinc acts promptly, and is not irritating if retained in the stomach. Sulphate of copper, though more irritating, is also more powerful, and may be employed when milder agents have failed. Tartar emetic should never be used. Ipecac acts too slowly. But all emetics are apt to fail if the narcosis is extreme, as the stomach is then insensible to any irritant.

A stomach-pump may not always be at hand, though, as inexpensive as they now are, no practitioner should be a day without one. But in the absence of an instrument specially made for the purpose, a piece of ordinary India-rubber tubing, three or four feet long, may be made to answer as a syphon. The contents of the stomach having been removed, water should be thrown in and again withdrawn, and this process should be repeated until the stomach is thoroughly cleansed.

For the purpose of keeping the patient aroused, we have a great variety of means at our disposal. One very generally resorted to is walking the patient up and down between two attendants. Flagellation with some light instrument that will not bruise may also be employed. A very efficient means is dashing cold water over the head and face, or, what is better still, cold and hot water alternately. But the most serviceable of all is electricity. The faradic current answers best, and may require to be very powerful—much stronger than a man in health could bear. It may be applied to all parts of the body in succession, so as to cause a general excitation of the nervous system; and there is no other agent which does this so thoroughly. As the cell is apt to give out and require rest after an hour or two of continuous use, it is well, if the case is likely to be prolonged, to procure a second cell and hold it in reserve.

The means at our command for maintaining respiration are the various methods of artificial respiration—Marshall Hall's, Sylvester's, Howard's, etc., the application of electricity to the phrenic nerves, and the inhalation of oxygen gas.

Artificial respiration is indicated whenever the breathing becomes very infrequent and superficial and there is blueness of

the lips. The necessity for this may often be averted, for a time, at least, by shaking the patient and calling sharply to him to *breathe*. If not too far insensible, he will obey this command as often as it is repeated. When artificial respiration becomes necessary, it is well to alternate the different modes, so as to lessen the local soreness that results from a lengthened use of any one method.

Electricity applied to the phrenic nerves in the neck will generally induce a deep respiration. This may be repeated 15 or 16 times per minute—the battery being used in the intervals to excite general nervous action. By the use of the two electrodes, both phrenic nerves may be acted upon at the same time; but the poles should be changed frequently, as the negative always excites stronger contractions than the positive. The current may require to be very powerful, and metallic electrodes will be found to produce much more effect than sponges. The value of electricity applied in this way, as well as for general excitation, cannot be over-estimated. Some very desperate cases have been saved by it when all the other means usually applied had proved ineffectual. But it must be borne in mind that electro-muscular contractility may be easily exhausted, even in the healthy subject, and we should be careful not to induce this exhaustion, or to mistake it, if it do occur, for a symptom of increasing narcotism.

The inhalation of oxygen gas is a resource of very great value in opium-poisoning. When we consider how imperfectly respiration is carried on, it is easy to see how oxygen is beneficial. Its effect is so striking that I think no one who has ever seen it used would willingly treat a serious case without its aid. When the respiration is very slow, for instance, two or three per minute, the full effect cannot be obtained unless artificial respiration is employed at the same time, in order to get a sufficient quantity of the gas into the lungs to act efficiently upon the blood. When this is accomplished, the improvement of the patient is usually very rapid.

It seems to me that surcharging the blood with oxygen does more than simply to provide for efficient respiration; for the benefit from it has been strikingly shown in two cases which I shall describe presently, in which the respiration was not embar-

rassed. There is evidence to prove that the physiological effect of the inhalation of oxygen is to facilitate the capillary circulation, and thus lighten the labor of the heart. If it be true, as Harley supposes, that in opium-poisoning the heart is held in check by irritation of the inhibitory fibres of the vagus the advantage of lessening the labor required for it is obvious. It is quite possible, too, that an abundant supply of oxygen in the blood may accelerate the decomposition of the poison, and thus act to some extent as a chemical antidote. The circulation may be aided by friction, applied always in the direction from the extremities to the trunk. To counteract the tendency to hypostatic congestion of the lungs, the patient should not be allowed to remain more than a few minutes at a time without change of position; and the sitting posture should be frequently resorted to to relieve the tendency of the blood to the brain. If the extremities should become cold, hot bottles, etc., should be applied. Care should be taken throughout the treatment not to expose the patient for a length of time without sufficient covering.

There is no chemical antidote for opium—that is to say, there is no agent which, combining with it, will destroy its noxious properties. Nor have we any complete physiological antidote. But we have two agents which are so far antagonistic to its effects as to render valuable assistance. These are coffee and belladonna.

Coffee has long been known as a stimulant to the brain and nerves, and as tending to prevent sleep. From recent experiments made by a committee of the British Medical Association, it appears that caffeine in large doses acts as a cerebral excitant, and tends to produce tetanic spasms. It thus antagonizes at the same time the tendency to coma, and to paralysis. This effect is also produced by theine, cocaine and guaranine, whose physiological action is identical with that of caffeine. Strong green tea has been used successfully in opium-poisoning. It is possible that the tannin of tea renders the morphine less soluble.

The antagonistic effect of opium and belladonna upon the pupil early led to the suggestion that one might be used in case of poisoning with the other, on the ground that perhaps the antagonism extended to the deleterious action of the drugs. But it is only within the last 15 or 20 years that any practical

result has come from this suggestion. At first, a few scattered cases were reported in which good effects had been obtained clinically. But within the last six or eight years the subject has been studied experimentally by numerous observers, and with somewhat different and conflicting results. It would be wearisome and unprofitable to follow out the details of this discussion, the gross result of which has been to demonstrate that there is a certain power in belladonna to counteract the toxic effects of opium, while the converse is true to a far less extent.

A committee appointed by the British Medical Association, and headed by Dr. Hughes Bennet, of Edinburgh, undertook last year to determine experimentally the antagonistic effects of certain medicines, and among them opium and belladonna. Their report, however, which was published in successive numbers of the *British Med. Jour.*, during the Autumn of 1874, had been essentially forestalled by Dr. Mary Putnam, of New York, in a paper in the *Medical Record* of June 2d, 1873, to which the reader is referred for a very thorough discussion of this question.

The admitted effects of small doses of belladonna are increased rapidity and force of the circulation; quickened respiration; increased temperature. Of large or toxic doses, the effects, on the other hand, are: fall of temperature; weakening of the heart's action; relaxation of the muscular system; paralysis of the respiratory nerves. We see at a glance that the first series of symptoms are directly antagonistic to the phenomena of opium-poisoning. We see equally clearly that the second could only intensify those phenomena. Thus, we have the whole matter in a nutshell. Up to a certain point, belladonna is our ally, doing faithful service; pushed beyond this, it deserts us and goes over to the enemy.

Attempts have been made to fix the amount of atropia which will antagonize a given quantity of morphia; but a moment's reflection will show that this is labor lost. The quantity of poison swallowed is no criterion of the amount absorbed. The patient may have vomited; the rate of absorption may have been modified by the fluid or solid condition of the drug; by the presence or absence of food in the stomach, or by idiosyncracy of the patient. Elimination may have progressed nearly as rapidly

as absorption. Finally, a given amount of morphia absorbed and actually doing its work, will affect different persons in different degrees. And again, this same uncertainty prevails in respect to the atropia. We must, therefore, be guided by the degree of narcotism present, irrespective of the amount of morphia taken, and we can judge of the proper amount of atropine to be given only by the action of small, tentative doses. One-fortieth of a grain of atropine may be given every half hour until there is some degree of dilatation of the pupil, and the pulse and respiration begin to be accelerated. These signs mark the limit of its beneficial action, and should be the signal for its discontinuance.

Having thus passed in review the various means which may be employed in the treatment of opium-poisoning, let us consider their application to a given case, in order to illustrate their practical use, and the circumstances that determine the choice of one or another:

Called to a case of supposed opium-poisoning, we must take a rapid survey of the circumstances, as far as they can be learned. Very often, these alone will be sufficient to establish the diagnosis; if not, the signs already described must be our guide. In determining upon the treatment, the first question is, has all the poison been absorbed from the stomach? And here, the information which we can obtain as to the circumstances, must decide our judgment. How much poison was taken? How long ago? Was it in a liquid or a solid form? Was the stomach full or empty? If the quantity taken was small and in the form of a liquid, if the stomach was empty, and if a considerable time has elapsed, it is not probable that any of the drug remains in the stomach. It will, therefore, not be wise to lose time with emetics or in procuring or improvising a stomach-pump. But if the circumstances are the reverse of these, it will be necessary to evacuate the stomach, and the question then lies between emetics and the pump. If the insensibility is very profound, the patient not showing signs of pain when pricked or pinched, there is very little chance that emetics will act, and if a stomach-pump is at hand, it will be best to proceed at once to its use. But if the patient can still be roused, or if there is delay in procuring a pump, a tablespoonful of mustard stirred in a tumbler of tepid water may be given, or two teaspoonfuls of powdered alum, or

half a drachm of sulphate of zinc. I have found that vomiting may be induced, where a considerable degree of nausea exists, by making sudden and repeated pressure upon the epigastrium. Irritating the fauces may also be tried. The emetic may be repeated in 15 minutes, if the first dose is ineffectual.

If the stomach-pump is used, not only should the contents of the stomach be removed, but the organ should be thoroughly cleansed by repeated injections of tepid water. A pint of strong hot coffee should then be pumped into the stomach, and the tube removed. Coffee is to be given also after the use of emetics, as soon as the vomiting has ceased. If the patient cannot swallow, and a stomach-pump is not at hand, coffee should be given by enema. The order for its preparation should be given the moment the nature of the case is known, so that it may be ready when required. The infusion should be made as strong as possible, and used clear. If the coma is not profound, and the respiration is not below 10 or 12, this may be all that is required. But if the coma is still growing deeper, and the respiration more infrequent, we must resort to other measures. One-fortieth of a grain of sulphate of atropia should be injected under the skin, and the legs and thighs should be smartly whipped with a bunch of small twigs or some other light instrument, taking care to act only upon the cutaneous nerves, and not to bruise the underlying tissues, unless we would add the effect of shock to the depression already existing. Strong ammonia held to the nostrils will be useful at this stage. Meantime, a battery should be got in readiness and its use begun. The weakest current should be employed that will excite action, and it should be applied in the manner before indicated, stopping from time to time to see what the muscles will do without its aid. Its use once fairly begun, it can thereafter be entrusted to an intelligent assistant. If the pulse is strong and full, a pitcher of cold water may be poured over the head every 15 minutes; but this should not be done if the pulse is small and frequent and the surface cold. In this case, hot bottles and friction should be applied, and stimulants administered. If, half an hour after the first injection of atropine, the pupils are still contracted and the breathing and pulse have not improved, the dose may be repeated, and under like conditions, a third and a fourth may be given; but when im-

provement has begun, it is better to defer a further dose, as atropine does not develop its full effect until an hour or more has past. If, notwithstanding these efforts, the breathing does not improve, or becomes still slower, or the coma still deeper, artificial respiration must be resorted to. If oxygen gas can be obtained, it should be used continuously until natural respiration is so far restored that the patient continues to improve when the gas is withheld.

If these means are judiciously applied, we shall very seldom fail in dissipating the symptoms of narcotism; but when consciousness is restored, and the respiration has regained its normal frequency, the danger is not yet over. Just as in the case of persons rescued from apparent drowning, there is a liability to a relapse of the prostration which may be fatal by asthenia. Hence, the patient should not be left until reaction is fully established, and the circulation restored to something like its normal steadiness and volume. But even then there is an ulterior danger. Owing to the long stagnation of the blood in the lungs, leading, perhaps, to capillary thrombosis, there is great liability to consecutive pneumonia. To guard against this, it is always well to adopt the plan already referred to, viz: frequently changing the position of the patient, and thus lessening the tendency to hypostatic congestion.

Of the cases illustrating the several points dwelt upon in this paper, the first three are brought forward to show that we may have dangerous and even fatal narcotism while the respiration is little, if at all, below the normal standard:

Case I.—*July* 23, 1874—Called in consultation by Dr. G. W. Chamberlain. Patient had puerperal peritonitis, for which morphia had been given quite freely, hypodermically, with slight if any reduction in frequency of respiration, when, on returning after a short absence, the Doctor found her in deep coma. When I saw her, there was complete insensibility, so that the cornea could be touched without causing movement of the eye-lids; patient could not be roused; pupil contracted to a mere point; face cyanosed; respiration 18 per minute. Atropine was at once injected, and strong coffee given freely. No improvement being observed after the lapse of three hours, a cylinder of oxygen was obtained, and its administration begun. In 15 minutes, the patient could be roused sufficiently to speak, and in two hours all the symptoms of danger had passed off. The patient recovered

from the peritonitis, but pneumonia set in, to which she succumbed after a prolonged illness.

This case illustrates also very strikingly the value of oxygen, and seems to suggest that it acts beneficially otherwise than by improving respiration; for here the breathing was already 18 per minute, and of good volume. With such frequency of respiration, the oxygen is induced into the lungs with great facility, and hence the prompt effect. The next case illustrates the same points:

Case II.—The patient, a healthy man, about 40 years of age, was operated upon at St. Luke's Hospital for incarcerated hernia, the operation being concluded at 4 P. M. Ten minims of Magendie's solution were ordered to be given hypodermically every two hours, or enough to bring the respiration down to 12. At midnight, it was reduced to 11, but by 5 A. M. it had risen to 15, and for the next 6 hours it fluctuated between 15 and 20, although in that time 105 minims of Magendie's solution were given. At 9 o'clock, the patient was cyanotic, unconscious, respiration 20, pulse 140. By 11, the respiration had risen to 22. Coffee was given freely by enema, and oxygen gas administered. The effect of the oxygen was immediately apparent. The cyanosis soon disappeared, and consciousness was restored, and all traces of narcotism were removed. But a condition of shock seemed to remain; the pulse became more and more feeble; delirium of a mild form set in, and the patient died on the third day. No *post mortem* was allowed.

Case III.—Dr. J. J. Reid has kindly furnished me with a memorandum of this case, which occurred at Bellevue Hospital while he was House Physician.

The patient was brought in in a state of deep coma—the respirations being 4 to 6 per minute. By means of the cold douche they were brought up to 14 to 16, at which point they remained for three or four hours, when death took place, the coma having remained throughout.

Case IV.—Called about noon to see Mrs. L., a patient of Dr. Chalmers. I found her unconscious, face dusky, lips and nails blue, respiration 5 in 3 minutes, pulse about 110, small and feeble. During the preceding night, patient had suffered with pain in the epigastrium, to which she had applied a piece of lint soaked in Magendie's solution—a remedy which she was using in the same way to alleviate the pain of synovitis of the wrist. A hot poultice was laid over the lint. During the morning, patient became unconscious and cyanotic, but could be easily roused. To my

question how she felt, she replied, "I feel as if I had taken a powerful anodyne. Can it be that enough of this morphia has been absorbed to affect me in this way?" The patient would take a tolerably full breath whenever told in a loud peremptory voice to do so. Oxygen was given very freely, with the best effect, and in a few hours the narcotism disappeared with no other treatment.

There are three points of interest in this case. The first is that morphia, applied for a length of time, may be absorbed to a dangerous degree, through a small surface of unbroken cuticle; the second is that a cyanotic patient with a respiration of 2 per minute may yet, when roused, give perfectly rational answers to questions and reason correctly as to symptoms; and the third is the satisfactory result from the use of oxygen. This latter point is still better shown in Case V., which also illustrates the inherently good prognosis of opium-poisoning, even in an apparently desperate case. I am indebted for the memorandum to the kindness of Dr. Abbie, of St. Luke's Hospital:

Case V.—Patient admitted in a perfectly unconscious condition; whole surface cold; face dusky; lips cyanotic; pupils contracted to a point; breathing very infrequent, being at one time only one respiration in two minutes. By means of the stomach-pump, injections of coffee, flagellation and the use of the battery, the respirations were brought up 3-5 per minute—the lips remaining somewhat cyanotic and the patient comatose. Oxygen was then obtained and administered continuously until the patient could be sufficiently roused to be walked up and down. In the course of $3\frac{1}{2}$ to 4 hours he showed the first signs of consciousness. From this he went on and made a good recovery.

He had been in the habit of using opium for some time before, but on this occasion took, as he states, half an ounce of the gum with the intention of ending his life.

Case VI.—Dr. H. F. Campbell relates a case of opium-poisoning in the *Southern Med. & Surg. Jour.*, May, 1860, in which over an ounce and a half of laudanum was taken. Five hours after, the respiration had fallen to four in the minute, notwithstanding that the stomach-pump had been used, artificial respiration employed, and cold water poured upon the head, together with the use of other means of arousing the patient. The action of the heart became very irregular, threatening immediate death. It was found that the horizontal position contributed to this ir-

regularity, and artificial respiration was thereafter continued in the sitting posture, by alternately lifting the patient slightly by the arms, and then pressing the arms down against the chest. Still, the condition of the patient did not improve, and finally caffeine to the extent of 20 grains was injected into the rectum, swallowing being impossible. In less than half an hour after the injection there was manifest improvement, which went on to complete recovery.

Case VII.—In another case reported by the same writer, a few months later, three ounces of laudanum had been taken 15 hours before being seen by Dr. C. The respirations were then 4 per minute, and obstructed by mucus; face of a dark purple; pulse feeble, about 100; muscular system completely relaxed. Twenty-five grains of caffeine were injected into the rectum. In 35 minutes after, the respirations had risen to 8. An hour after, they had increased to 12, and soon reached 16, and the skin acquired a more natural color. Notwithstanding the improvement, bloody mucus continued to accumulate in the lungs, and the patient was ultimately suffocated by it without having regained consciousness.

These two cases illustrate extremely well the therapeutical value of coffee, while the second shows that the danger cannot be estimated entirely by the infrequency of the respiration, which, in this case, reached 16 before death.

In a case which occurred at St. Luke's Hospital recently, 20 minims of Magendie's solution of morphia were given in two doses, during the evening, for the relief of extreme neuralgic pain. Before midnight symptoms were developed which so closely resembled those of opium-poisoning that the case was treated as such by the house-staff. On my arrival, at 2 A. M., I found the patient profoundly comatose, breathing very irregularly—in fact, at times scarcely breathing at all, unless from the effect of the battery; lips blue; face dusky; *pupils not contracted.* This latter symptom led me to question the correctness of the diagnosis, and to suspect that it was a case of apoplexy. This suspicion was soon confirmed by the divergence of one eye, and subsequently of both, and by the occurrence of inequality of the pupil. Dr. G. A. Peters arrived about this time and concurred in my view, which the event proved to be correct, as the patient remained in the condition above described for about 24 hours, when death took place quite suddenly after a short return

to consciousness, and apparently from a fresh hemorrhage. This case shows how valuable a single symptom may be in distinguishing between opium-poisoning and apoplexy.

ART. III.—*Surgical Notes from Abroad.* By GEO. HALSTED BORLAND, M. A., M. D., late Surgeon in the French Army, Medaillé, etc., Baltimore, Md.

I. *Resection of the Entire Scapula* is a very rare operation. The difficulty and the amount of skill required are considerable, and when we take into consideration the gravity of the prognosis, we form an idea of the importance to be attached to such an occurrence.

We learn from the *Recoglitore Medico*, Jan. 30th, 1875, published at Forli, Italy, that Dr. Vinzenzo Omboni, Chief Surgeon in Bozzolo (Cremona), performed with success the resection of almost the entire scapula, on account of a medullary osteo-sarcoma. This is the fourth resection of the scapula ever reported in the annals of Italian surgical history.

II. *Etiology of Congenital Articular Deformities.*—Dr. Conrad, private instructor and assistant surgeon at the Hospital at Bern, Switzerland, has recently delivered a very instructive and pithy lecture before the Medical Board on the causes of congenital deformity of the articulations. His valuable treatise appeared in the *Correspondenzblatt fur Schweizer Aerzte*, March 15th, 1875. It opens with the recital of three cases in point, and after an exact account of the details observed during their course, a résume is given in these words: Let us now throw a retrospective glance upon the three cases above mentioned; we see in the first two that peculiar position of the offspring presenting as nearly as possible the ovoid shape; in all, the articular deformity with more or less difficulty of movement—the remainder of the body being regularly developed. In the first case, in addition to articular deformity, is noticeable the remarkable smallness of the hollow of the ovum with its viscid, very thick skins. If we remember the important moments of the anamnesis, namely, the abnormal flow of water from the genital organs, (in the 4th, 6th and 10th* months of pregnancy) fol-

*The Germans reckon 10 months (4 weeks each) of pregnancy.

lowed by pains resembling those of labor, the diminution of the quickening, the modest expansion of the abdomen (and that during birth in each of the three cases there was very little water before, none after)—we undoubtedly have to do with cases of congenital deformity of articulation caused by intra-uterine pressure; and this pressure was exercised not only by narrowing the space within the uterus, resulting from *the small quantity of, or entire want of liquor amnii*, but also by the active contractions of the uterus, which produced, through irritation, the premature flow of the liquor."

Strange enough, no mention is made by Dr. Conrad of the influence of a fright or a fall in producing articular deformity in utero; and yet there is abundant evidence in many standard works on obstetrics to show that such causes do sometimes produce both articular and other congenital malformations.

III. *Effect of Ergotin on the Bladder.*—J. Willimsky, a recent graduate in surgery of the school of Greifswald, wrote a dissertation on this subject published in the *Contralblatt fur Chirurgie*, No. 37. The author informs us that his preceptor requested him to paint the outside of the bladder just above the symphysis pubis in some cases; in others to inject the previously emptied bladder of dogs and rabbits with a solution of aq. ext. secal. cornut. The experiments were duly made, and with the following effect: Contraction lasting several seconds; no general disturbance. The author recommends the above-mentioned drug in the form of injections into the bladder in cases of vesicular paralysis, and illustrates his recommendation by two cases, the history of which, taken from Vogt's notes, is as follows: A Miss, 46 years of age, was suffering with a typical paralysis of the bladder. The division of a cicatricial growth of the posterior wall of the bladder with the cervix uteri was without effect. Aq. ext. secal. cornut., grs. $4\frac{1}{6}$, was injected, at first daily, afterwards less frequently, into the carefully cleaned and emptied bladder. In fourteen days, the cure was accomplished. The second case was one of acute vesicular catarrh. Patient was unable to exercise thorough control over micturition; could not empty the bladder entirely. Ext. secal. cornut. was injected every other day. The extract ($3\frac{1}{3}$ grs.) was thus employed only three times, when the trouble ceased.

The success of hypodermic injections of secal. cornut. in post partum hemorrhage, etc., invites us to go further in this direction, and suggests that although the cures effected by *Willimsky* were somewhat rapid, the time might have still more been shortened had the extract have been employed hypodermically. As drugs thus used act quicker upon other tissues than when administered per orem, or externally applied, we have every reason to believe they would have the same beneficial result upon the tissues of the bladder, producing prompt muscular contraction, and thus avoiding any risk of stricture or orchitis, attendant upon the prolonged use of urethral or vesicular injections. The experiments deserve imitation.

IV. *Chloroform in Pædiatrics.*—That we must often have recourse to chloroform in performing surgical operations upon children of the most tender years, is undeniable. We can do so, provided we do not deviate from the important precautionary rules laid down for the administration of this dangerous anæsthetic. But a grave question here arises: From what age on can chloroform be used without the fear of accident? This question would be answered by many distinguished men thus: Chloroform can *never* be safely used to reduce a patient to total anæsthesia. Let us hear Dr. Bergeron on this point, (*Gazette des Hôpitaux*, 11th March, 1875): "Most surgeons accept one year as the utmost limit. Guersant and Giraldés have given chloroform to children a few days after birth—these children being afflicted with purulent ophthalmia; other *operateurs* have also narcotised their little patients at this early date, when the operation for the cure of hare-lip was to be performed. In general, we may give chloroform to children when there is fear that by brisk movements they may interfere with an operation or with the determination of a diagnosis. But," continues Bergeron, "the safety of the chloroform anæsthesia has its limit. What, now, are the contra-indications—what the means to be employed in case of accident? Among the contra-indications are anæmia from loss of blood, also operations in the mouth—in a word, operations by which the blood may easily flow into the *tractus respiratorius*, which, in consequence of the narcosis, does not react. The chloroformization must not only be broken off as soon as the least trouble is foreshadowed, but must be administered

from the beginning at intervals—even then, when every stage of anæsthesia has been successfully gone through with. As a precaution against serious accidents, which, even without it (Bergeron seems here to contradict himself), are not much to be feared, let the following procedure be carried out: The head of the child should be thrown back. The fore finger of the operator should be placed well into the pharynx, as well to prevent the tongue from falling back upon the epiglottis, as also, when necessary, to produce energetic respiration by irritation of the mucous membrane of the larynx. To the same purpose, also, fresh water may be douched into the nostrils, moist sponges applied to the skin, and the face slapped with wet cloths. The paralyzed action of the heart may be overcome by electricity."

We cannot endorse Bergeron when he says that "we may give chloroform to children if there is danger that by brisk movements they may interfere with the operator," as, for instance, in hare-lip. The services of a qualified assistant are all sufficient. It is questionable, also, if the drug should be used as an aid to diagnosis, when (if relaxation be absolutely necessary) we possess the comparatively safe means of ether.

V. *Cancer from a Clinical Point of View.*—Professor v. Nussbaum, in his able discourse upon this subject, comes to the following conclusions (*Münchner Arztl, Int. Bl.* No. 10, 1875): (a) Cancer is a growth of the epithelium that spreads rapidly and supplants the stroma of connective tissue, by slight causes goes into ulceration, as a local trouble, produces general sickness by bleeding and decomposition, and finally, particles are carried through the circulation into different organs, producing in them the same growth and organic process, ending now in death. (b) As causes of cancer, may be cited old age, chagrin and great mental anxiety; further, all structures incongruous to epithelium and connective tissue predispose to cancer—warts, scars, chronic swollen glands, etc. Moreover, those parts are especially the seat of cancer which are constantly irritated, without at the same time becoming acutely inflamed. Cancer is not born with the individual, and is not contagious. It is in the beginning an entirely local disease, and only becomes, through metastasis, a dyscrasia. (c) The humeral infection is to be markedly distinguished from cancer-dyscrasia. The humoral infection can en-

tirely cease, and never contra-indicates infection. (d) Cancer relapse is either continuous, as when cancerous elements remain, or regionary, as when neighboring tissue, unhealthy and predisposed to the development of cancer, remains; or we may have a transplantation relapse, as when cancerous particles get into the vessels and are swept away into the circulation. (e) *Cancer is radically curable by early and sufficiently extended operation.* (f) Patients that allow operation live, according to exact and lengthy statistics, certainly much longer than those who refuse such a measure. (g) All means that work on the tissues, the blood and nerves may be considered. Early and extended operation stands at the head. Medicines often aid, especially after scooping out the cancer. Among the most valuable are iodine, arsenic and cundurango. The parenchymatous infections merit our most earnest attention. Disinfectants and narcotics are indispensable in advanced stages.

Such is the opinion of one of Europe's most brilliant surgeons. How different from the celebrated Duparc, who says "Cancer is incurable; if it has been cured, it was no cancer." These two eminent representatives of French and German science are still carrying on their surgical war, the history of which will undoubtedly hand down to the medical world a vast field of information.

Clinical Reports.

A Case of Poisoning by Sulphate of Morphia. GEO. BAYLES, M. D. (Read before the Medical Library and Journal Association of New York, April 23, 1875, in connection with the paper by Dr. A. H. Smith, (page 167) New York.

A case has occurred in my practice recently which may very appropriately be reported in connection with the interesting and suggestive paper just presented by Dr. A. H. Smith. Considering all the facts, it is a remarkable case of recovery from profound narcotism, and beautifully illustrates the benefits resulting from unremitting and correct methods of sustaining the heart's action until the functions of the secernent organs have effected the elimination of the depressing and paralysing poison. Certain facts ante-dating the occurrence of the poisoning ought to be mentioned, for reasons which will be apparent.

The patient was a gentleman of about 40 years of age, who, until about 14 months ago, had always enjoyed excellent health. In 1873–4 he made repeated visits to the South on business connected with mining interests, and was always much exposed to the effects of out-door life in very changeable weather. During one of his visits, he contracted pleuritis on the left side, but he returned North in quest of treatment, and soon recovered.

About September 1st, 1874, he made his last trip to the South, and was a second time taken ill and obliged to come North. Without much delay, he visited the office of Dr. Alonzo Clark, who pronounced his case one of pleuritis of the right side. The physicians at the South had told him that he had an hepatic disturbance of a malarial origin, but said nothing about pleurisy. The pleurisy had been sufficiently well pronounced, as Dr. Clark found the pleural sac nearly filled with serum effusion. Repeated visits to Dr. Clark proved that absorption was at first active, and then seemed to be arrested. He felt able to visit Newton Falls for a few days, but his journey was not a benefit to him physically, and on his return to New York, he put himself under the care and observation of Drs. Clark and Elsberg. The progress of the case seemed to be, for a time, towards recovery, and afterwards to pass into a sub-acute and atonic form. Through the inability of Mr. S. to visit the offices of the gentlemen named, the case came under my care. I saw the patient nearly every day from the time of entering upon medical attendance, Nov. 5, 1874.

From the date just mentioned until some time in the new year, the patient was able to leave the house only once, on which occasion, a short ride was taken. The prone posture was the habitual one, and the general relaxation of the system seemed to be due chiefly to malarial malaise.

The case was one which seemed exceptionally unfavorable to the safety of the patient, should anything, however trifling, act in the direction of a further embarrassment of the respiratory function, or indirectly, through the heart's palsy, diminish the proper purification of the blood.

Now, all that I have stated concerning the case is pertinent to the instance of opium-poisoning, to be considered, in so far as it reveals the state of the general health, the measure of bodily vigor, and the probable condition of the chest organs at the time when an unaccountable disregard of the physician's orders and a reckless experimentation, equal in mystery to the case of Prof. Walker, of Brooklyn, overwhelmed the patient in a lethargy that was well nigh fatal.

On December 27th, Mr. S. did not feel quite so well as usual,

mainly in consequence of considerable coughing, accompanied with retching, which nothing seemed to relieve, and which culminated in a severe fit of coughing of a very exhausting character, lasting an hour, and commencing from after dinner at 3 o'clock. This severe paroxysm of coughing was relieved, however, by 10 minims of the solution of the sulphate of morphia (Magendie's), which Mrs. L. administered, having had directions to that effect given by me to meet just such and other special indications. This produced a quiet sleep of an hour and a half duration. In the evening, the patient was so bright and comfortable as to spend an hour in pleasant conversation in a room on another floor than the one he occupied.

For three weeks previous to this time, Mr. L. had taken from 20 to 30 minims of Magendie's solution of morphia, perhaps two or three times a week, to allay severe muscular pain of the back and lower extremities and for nervous inquietude. One night, having taken as many as 60 minims without inducing sleep, and the effect on the stomach the following day being so distressing, it was discontinued for ten days.

On the evening of December 27th, the patient retired at 10 o'clock, and, being wakeful, his wife gave him 10 minims of the Magendie's solution. At about 10.30, his wife gave him 20 minims more. At 11.30, she gave him 30 minims more; after which she fell asleep, and the patient being still wide awake and restless, with disagreeable sensations about the face and neck, which he described as feeling like "cob-webs," he took 30 minims first at 12 o'clock, again at 1 o'clock, and again at 2 o'clock. The itching and cob-web sensation continuing, the patient was kept awake until after 8 o'clock in the morning. About this time, he had a chattering of the teeth, though nothing that he regarded as a chill, but which led Mrs. S. to send for me. with request that I should call in the forenoon rather than in the afternoon, which had been my custom. At 8.30, (feeling an inclination to sleep) Mr. S. requested to be left undisturbed by breakfast and allowed to rest. Sleep continued heavy until 11.45, when I arrived.

A single glance seemed to reveal the awful fact that the patient was profoundly narcotized, and was parting with life with great rapidity. Under the impression that sleep had come at last to her suffering and exhausted husband, Mrs. S. sat thankfully away from the bedside, employed with her pen, nor thought of any danger until my entrance and expressions gave her the alarm.

The complexion was cyanotic; the mouth and eye-lids half open; the surface of face, scalp and hands loaded with large

beads of cold perspiration, which, about the nose and mouth, coalesced and trickled down upon the bed-linen; the breathing was stertorous, irregular and very slow—not more than two respirations in a minute; the pulse was intermittent and so weak as to be almost imperceptible at the wrist, and there was a fluttering movement observable on both sides of the neck. The saliva in the mouth was being churned into a froth, which welled up and then disappeared at every return and subsidence of the respiratory movement. The pupils were contracted to the size of pin-points, and there was no response to anything which was done to make an impression upon the senses. So much for first appearances, and the facts which immediately preceded the condition in which I found my patient upon my arrival.

Without a moment's loss of time, I summoned all those in the household who could be of any service; the windows were lowered from the top; the fire in the grate was revived. One person was sent to make mustard poultices for the chest, arms, thighs and ankles, also strong coffee; others were set to rubbing and chafing the limbs and trunk with as much energy as possible with warm, dry flannels, sprinkled with mustard.

After these preliminaries, I ran off to see some neighboring physician who could assist me, and who had a portable electrical apparatus ready for use. As might have been expected, I visited four offices before I found an available Doctor. I found Dr. Fred: A. Castle at home, fully equipped and ready to aid me. He put his Faradic cell battery in condition for immediate use, and loaned me a hypodermic syringe. I next ran a block further to a drug store, and had put up for me an ounce solution of atropiæ sulphas, of a strength that 10 minims would represent about $\frac{1}{40}$th of a grain of atropia. There was a small addition of dilute sulphuric acid to the solution—a mere trace. Returning to the patient, I immediately injected 10 minims of the solution in the arm just below the shoulder. With reference to this part of the treatment, I will say that I made, within an hour, three hypodermic injections of the atropia (10 minims each time); first in the vicinity of the shoulder, next in the inner part of the thigh, and again in the outer aspect of the leg below the knee. I also put 10 drops of the solution, with a little more water, once upon the tongue of the patient. In 45 minutes after the first injection, I observed the first dilation of the pupils; but they dilated irregularly, relatively as to the organs concerned, and irregularly as to contour of the pupils in both organs. At last, in about an hour or an hour and fifteen minutes, the pupils were widely dilated in both eyes. There was no further occasion for the use of this remedy, as the signs

of its action continued throughout the period of somnolence. Almost as soon as the atropia could be administered, the battery was ready for use at the bed-side. Six cells were charged, and the current proved very strong. The poles were applied to the præcordial and clavicular regions. Strong muscular contractions were produced by every contact of the poles with the person.

Injections of beef tea and brandy were given per rectum, alternated with injections of strong coffee. These enemata were repeated at ten, fifteen and thirty minutes intervals, being guided in their repetition only by such dictation as the pulse seemed to afford.

As soon as possible, perhaps three hours after my arrival, I received a tank of oxygen gas, which I had sent for among my first orders. I administered the gas by the five-gallon bag full as often as once every 20 minutes. I simply allowed the gas to escape close by the nostrils of the patient, taking care to check the flow during the expiratory movement of breathing.

At 2 o'clock in the afternoon, no apparent change for the better having occurred, I sent a carriage in all haste for both Drs. Hubbard and Leaming. The respiration began to grow a trifle more frequent before the carriage returned, bringing Dr. Leaming. The Doctor counted, I believe, about three, or, perhaps, four inspirations in a minute, and upon this sign of improvement, as compared with the lesser rate of action that I had observed, ventured an encouraging prognosis, and counseled persistence in all the methods which were being employed for resuscitation. Dr. Castle could not remain with me after the first half hour of his attendance, and, not expecting to see him again until midnight, Dr. Leaming kindly undertook to find a competent assistant, and sent to my aid Dr. Davis, of Fifty-fourth st., W. Twice or three times between noon of the 28th inst. and daybreak of the 29th, either Dr. Davis or myself passed a flexible catheter and emptied the bladder. The strong mustard plasters produced no redness of the skin until they had been on nine or ten hours. After midnight, they were removed, and the surfaces bathed. The respiratory action began to show decided improvement in frequency and fulness after 8 o'clock in the evening. The pupils remained largely dilated. The complexion began to assume a more normal hue—indeed there was some slight alteration for the better in the complexion as early as 3 o'clock. There was a feeble but real response indicative of uneasiness when the fumes of strong hartshorn were applied to the nostrils. Not a trace of intellectual consciousness was observed until between 1 and 2 o'clock on the morning of the 29th inst.

When this perceptive restoration was in progress, the first thing noticed was that the eyes opened when a loud call was made close to the ear. Next the hand was lifted, and by and by carried to the face. Next fumbling about the face became very constant, and sometimes the top of the head was visited by the hand. Deglutition, which had been suspended, was re-established, so that the enemata were no longer given; but beef tea and brandy, and sometimes coffee, were given by spoonfuls. The next evidence of returning animation was in the feeble but emphatic resistance the patient made to the administration of the oxygen gas. The head would turn away from side to side, and the hands try to clutch the conductor attached to the bag. After a little while, all meddling was vigorously resented, and when speech returned it was first employed to express impatience. It was not long, say about 3 o'clock in the morning, that the patient recognized the people about the apartment, but called them all by names not their own. He did not recognize his wife nor me, though he saw us, and was frequently excited to ask irrelevant questions. By daybreak, the respiration had acquired its customary volume and frequency; the pulse was approaching fulness, and about 90 or 95. A marked characteristic of returning consciousness was a disposition to refuse all offices of the nurse, and to keep everybody "at arm's length." When circumvented, he became very much irritated, and gave license to his temper in warm words. This was so foreign to his natural disposition (being by nature one of the most amiable and gentle of men that I ever knew—for our social acquaintance had existed for several years—) that I regard it as a circumstance of especial interest.

A summary of the whole case, as far as the opium-poisoning is concerned, is this: That within $3\frac{1}{2}$ hours, Mr. S. had taken 150 minims of Squibb's solution of morphia, made up after Magendie's formula, which quantity was equal to 5 grains of the salts of morphia, or about 30 grains of the crude opium of the drug market. The doses were always measured in a graduated minim glass, and a half wine-glass of water added. The general condition of the patient previous to taking the medicine was one of restricted lung action, and of labored heart action. The patient was not overpowered by the morphia until six or six and a half hours had elapsed after taking the last dose of 30 minims. Profound somnolescence lasted from 8.30 o'clock A. M., Dec. 28th, to 2.30 o'clock A. M., December 29th—being 18 hours. Partial somnolescence, or imperfect consciousness, lasted from 2.30 o'clock of the morning of Dec. 29th, to 5 or 6 o'clock in the morning—somewhere between $2\frac{1}{2}$ and $3\frac{1}{2}$ hours. Recovery of faculties was pretty thoroughly accomplished by daybreak.

Treatment could not be supplemented by the very efficient aid of perambulation and general muscular exercise, as the patient was heavy, asthmatic, too profoundly narcotized, and unfit for such exercise had he taken no morphia.

I might mention, as a gratifying sequel of the case, that Mr. S. is now so much improved in health as to be able to take long walks in the streets and rides in the park every fair day, and is confidently expecting a complete emancipation from all his chest disabilities and other conditions inimical to perfect health.

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*Poisoning by Arsenious Acid—Convulsions.** H. S. Jones, M. D., Corydon, Ky.

Jesse Thomas, aged 22 years, living near Green Lick, in this county, was severely poisoned by arsenic, taken through mistake for quinine, on Monday, 17th August. Having previously had a chill, his wife, at his own request, went to the house of a neighbor, Larkin Jones, a brother of Mrs. Thomas, in order to get some quinine. Jones informed her where the doses of quinine could be found, in a small box on the mantle. She forthwith returned home with the quinine, as she supposed it to be. What was her horror to learn, soon after the administration of a dose, that her husband had swallowed very nearly a teaspoonful of arsenic instead of quinine! It seems that Jones knew nothing of his wife's having put the arsenic in the same box in which he had afterwards placed a few remaining doses of quinine, and hence the mistake was accounted for. The arsenic had been used for destroying rats about the premises. At 1 P. M., an hour after Jesse had partaken of a hearty dinner of bacon and beans, he swallowed the poisonous draughts mixed in cold coffee, the usual way of administering quinine in this malarial country.

Symptoms and Treatment.—In five minutes after swallowing the arsenic draught, Thomas observed to his wife that he did not believe the dose he had taken was quinine, "for it lay in the bottom of the cup after the coffee was drunk off, and that the dregs, which he forced down his throat, had a very peculiar taste, unlike any quinine he had ever before taken, and that he

*Dr. Edwards,—This case, you will observe, unquestionably proves that arsenic, in over-doses, produces convulsions, and offers an easy solution of the rigidity which was presented in the case of Gen. Ketchum just before he died in Baltimore, where it was assumed by the friends of Mrs. Wharton that he had cerebro-spinal meningitis, and so cleared the prisoner from the charges of murder. Thinking this case would be of some interest to the profession, I forward it to you for publication.

Yours truly, John L. Cook, M. D.

Henderson, Ky., April 22, 1875.

had already begun to feel a sense of dizziness in the head and slight distress about the stomach." In five minutes' further time, great swimming in the head, vertigo and retching, with slight vomiting, supervened; rapidly following which much pain throughout the whole system was experienced, and immediately spasms begun. Daniel Scott and Larkin Jones were present, and both concur in the above statement of facts. Upon the supervention of the first spasm, much alarm was evinced on the part of those present for the safety of the patient, who seemed to grow worse rapidly.

Elisha Powell, a well known mechanic of this county, and at this time a medical student, a gentleman in every way reliable, was sent for—he living within a mile of the patient. Upon arrival, he felt alarmed at the violent symptoms, and sent for me, distant five miles. Two hours had fully elapsed from the time the messenger was dispatched until my arrival at the bedside of the patient. One hour elapsed from the time the arsenic was taken into the stomach until the arrival of Mr. Powell, up to which time the patient had vomited only once slightly, but had suffered intensely from 3 or 4 violent fits or spasms, which were evidently growing more and more severe.

Treatment.—Mr. Powell only succeeded in administering a few raw eggs, followed by ipecac, to vomit the patient, which succeeded ere the crampings and spasms exhibited great violence. But these spasms soon amounted to convulsions, which continued in rapid succession until my arrival. The case was so severe as to require the physical strength of Messrs. Powell, Scott and Jones to retain the patient in bed.

On my arrival, the patient was convulsing furiously, and so stiff and rigid was the entire muscular system that no sort of external force could have succeeded in producing the least amount of flexion of either arm, leg, or other joint of the body, without producing a lesion. So clenched were the teeth as scarcely to admit of the escape of the froth and contents of the stomach. Indeed, particles would have to be removed from the mouth by the fingers of the attendants. To have given him anything more by the stomach in that condition was utterly impossible; for he was unconscious, and his tongue swollen; eyes suffused—even blood-shot. The first and only thing I did for more than two hours was to make a solution of sulphate of morphia, grs. iss, and with a hypodermic syringe insert the same into the arm of the patient. Up to this time, be it remembered (three hours from the time the arsenic was taken), Jesse Thomas had suffered from convulsion following convulsion in rapid succession, until it seemed almost impossible for him to recover.

Now for the *result* of our experiment: Not another convulsion followed the hypodermic injection, and gradually the spasmodic action of the whole muscular system subsided, followed by the most profuse perspiration. According to the statement of Elisha Powell, six hours afterwards not a muscle moved, and our patient passed the remainder of the night in peaceful and quiet slumber, arousing the next morning perfectly conscious, and complaining only of much soreness and a painfully distended bladder, which was relieved by a catheter.

As soon as the muscular system of the patient on the previous night was sufficiently relaxed to take anything into the stomach, he was given hourly a teaspoonful of the solution of iron (ʒij) in whiskey (ʒiv). On visiting him last evening for the 3d and last time, I found him doing well, and hence dismissed the case.

A Case of Relaxation of the Pubic Ligaments after Labor. J. Barbour Newman, M. D., Richmond, Va.

Mrs. R., a well-formed and healthy lady, about 25 years of age, living on Cherry street, Sidney, was taken in her second labor about noon on the 10th February. At 4 o'clock on the same day, the vertex was found at the head of the inferior strait, the head well flexed on the chest, the os thoroughly dilated, and the vulva and soft parts moist and pliant. The pelvis, in its inferior transverse diameter, seemed a little contracted, though not enough so to arouse any fears until the lapse of several hours, when, finding no progress and the head immovable, though the pains continued regular and strong, the family was informed that the labor would probably be protracted and tedious. A few minutes later, without any unusual effort, the fœtus and placenta were expelled, and the labor was most speedily and unexpectedly terminated. After resting well for the remainder of the night, she was found comfortable next morning, but complained of some soreness over the pubic arch, and said when she turned over, she could feel a movement of the bones in that region. I then, for the first time, suspected an unusual relaxation of the ligaments, and, on making an examination, discovered that, by using a little force, either of the bones of the symphysis could be moved in an antero-posterior direction about the space of half an inch. No other treatment was adopted, but positive orders given to remain quietly in bed, and in one position—on the back—until allowed to rise. But these instructions were not obeyed, and in less than a month she was up and walking about her room. At first her gait was unsteady, and she walked with much difficulty,

but now, about two months since her delivery, she walks as well as she ever did.

The seriousness and infrequency of such cases induces me to make this report.

Correspondence.

Uses of Carbolic Acid.

Mr. Editor,—Seeing in the April No. of the *Monthly* a communication upon the use of *Carbolic Acid in Gonorrhœa*, I am induced to state my own experience with the article.

I began to use it soon after its introduction to notice in various local affections and conditions. It appears adapted to all inflammations of mucous membranes, as well as to ulcerated surfaces. I have used it in all affections of the vagina and uterus, where the mucous membranes were diseased, both simple inflammations and ulcerations, and also gonorrhœal and syphilitic.

About a year ago, it occurred to me to use it in gonorrhœa of the male, in a stronger form than is usual, as a common injection. I commend its use as follows: Take a common silver probe, and wind upon its bulbous extremity some cotton, in such a way that it will not slip off. Saturate the cotton, previously moistened in water, with a mixture composed of strong carbolic acid and glycerine, each one part, and water from four to ten parts, according to existing indications. This I introduce within the urethra from one inch to two or more inches. It will cause smarting for a few minutes, but not usually more than fifteen. This course I follow up every day, if the soreness is not too great. In some instances, a complete radical cure can be accomplished if the case is a recent one. I have also added the acid to any mixture thought best to be taken internally, not giving more than one grain in a dose.

In vaginitis, either from ordinary causes or specific, it makes an excellent injection, used in various degrees of strength. As a lotion to the genitals in puerperal females, it acts finely as a deodorizer and antiseptic.

I used in a case of ophthalmia neonatorium not long ago, a collyrium of carbolic acid and hyposulphite of soda, in connection with nitrate of silver, with marked benefit. The mother had leucorrhœa before confinement, with considerable local irritation, and if I had been notified of the fact a few days before labor, that condition might have been obviated.

I desire to add my own testimony to the great value of carbolic acid, both externally and internally exhibited.

Knoxville, Tenn., April 5, 1875. F. K. Bailey, M. D.

Proceedings of Societies.

AMERICAN MEDICAL ASSOCIATION.*

The 26th annual session convened in Louisville, Ky., *Tuesday*, May 4th, 1875—Dr. W. K. Bowling, Nashville, Tenn., President; Dr. Wm. B. Atkinson, Philadelphia, Secretary. Between four and five hundred physicians were in attendance. Prayer by Rev. Dr. Lamar, of the Christian Church.

Dr. E. Richardson, Chairman of the local Committee of Arrangements, delivered the address of welcome; he also presented various invitations to receptions, &c.

Dr. N. S. Davis, Chicago, announced that Dr. Le B. Bottsford, St. John's, New Brunswick, President of the Canadian Medical Association, was present, and, on his motion, was invited to participate in the proceedings. Dr. B. acknowledged the courtesy appropriately.

The President delivered his address, announcing as his subject *The Relation of the American Medical Association to Medical Education in the Past, and its Duty to that End in the Future.* He enumerated the objects of this organization to be: (1) To give emphatic expression to the views and aims of the medical profession; (2) to supply more effectual means for cultivating medical knowledge; (3) to elevate the standard of medical education; (4) to promote the usefulness, honor, and interest of the medical profession; (5) to enlighten and direct public opinion in regard to the duties, responsibilities and requirements of medical men; (6) to excite emulation and concert of action in the profession; (7) to foster friendly intercourse; (8) to take cognizance of the common interest of the medical profession in every part of the United States. Under the last head, he suggested that this meeting resolve that it be regarded as derogatory to any physician to take as a student of medicine any one who cannot exhibit evidence of having taken a degree in a regular chartered college, or a certificate of qualifications necessary to become a student of medicine, from a board of examiners appointed for that purpose by the American Medical Association. This point he advocated with great earnestness and force.

Thanks were voted the speaker, and the address was ordered to be published.

A number of papers were read by title and referred to appropriate Sections.

The several *Sections* met during the *afternoon*. That on

*This report is compiled from the *Courier-Journal*, *Louisville Commercial* and *The Clinic*.

Practice (Dr. Austin Flint, chairman) opened with a paper by Dr. N. S. Davis on *Conjoined Meteorological and Disease Observations*, which paper is spoken of as containing valuable discussions. A capital paper on *Dosage in the Administration of Drugs* was next read by Dr. E. H. Clarke, Boston.

In the *Surgical Section* (Dr. Paul F. Eve, chairman pro tem.), Dr. Andrews, Chicago, presented a paper on the *Mortality Rate of Herniotomy, Amputations, etc.*, showing that more favorable results follow such operations in the Lake region of the United States. The tables were based upon operations made in hospital and private practice by numerous surgeons scattered along the great Lakes.

Dr. L. A. Sayre read a paper on *Reflex Paralysis Caused by Irritation of Genital Organs.* He detailed several cases in which very rapid relief of paralysis affecting various parts of the body followed circumcission in the male, and clitoridectomy in the female.

A member from Alleghany City reported a case of *Atrophy of the Bladder* (with photographs) successfully operated upon.

In the *Section on Obstetrics* (Dr. Byford, chairman), Dr. M. B. Wright, Cincinnati, reported a number of cases of death of children which had occurred in the Cincinnati Hospital—cases of pigmentation, associated, however, so far as could be discovered, with change in no organs, except, perhaps, the kidney, and blood somewhat disorganized. Cause, supposed to be some yet undiscovered poison generated probably in the mortuary.

A member from Boston reported a similar experience in the General Lying-in Hospital of that city. No case out of a dozen recovered. The cause was found to be some rotten apples and other trash in one of the air-chambers.

Dr. Nathan Allen, Lowell, Mass., made some remarks regarding the decrease of birth-rate—especially in New England. His views were discussed by Drs. Wright and Reamy, Cincinnati, and Jenks, Detroit.

Second Day.—A question arising as to who constitute permanent members, Dr. N. S. Davis said they are those elected as such upon the recommendation of the Committee of Arrangements from locations where there are no local societies existing at the time, or else they must be members of good standing in their respective State Societies. The idea is that applicants should not be made permanent members when there are local societies in their own place entitled to representation, while they are not members of such local societies. Such can not be admitted to the neglect of the local organizations.

In answer to the question could a delinquent member be re-

stored to his privileges by payment of back dues? an instance of last year was cited in which a former member desired to be reinstated by the payment of 25 years' back dues, but was refused.

After a recess of 15 minutes, the President announced the Committee on Nominations, composed of one member from each State represented.

Dr. W. B. Atkinson read a communication from Dr. A. H. Daud, Secretary of the Canadian Medical Association, presenting the following resolution adopted at the last meeting of his Association; "That in consideration of the best interests of medical science, it is desirable that a medical conference should take place between the American and Canadian Medical Associations, at some central point, to be determined upon, and that the American Medical Association be advised as to the desirability of becoming more intimately acquainted, and affording an opportunity for the discussion of medical and surgical subjects on a common basis." Unanimously adopted.

A resolution requesting Congress to take immediate steps in granting to physicians and surgeons connected with the army and navy the titles proposed to be bestowed upon them, was adopted.

The following from Dr. E. Seguin, N. Y., one of the delegates to the International Medical Congress, was read and referred to a committee: "You have twice sent delegates to the British Medical Association, and kindred European societies, to invite them to concert a plan of uniformity of methods, instruments, scales, and records for clinical observation.

This proposition has become more opportune since the meeting in Paris for the adoption of uniform weights and measures by all nations, in which convention Profs. Hilgan and Henry represented the United States, but in which the special wants of unity of measures of our profession are not requested. It was advocated by Sir Wm. Jenner, Reynolds, Gibson, Stewart, Squire, Sidney Ringer, Wilson, and Tilbury Fox in England; on the continent by MM. Morey, Charcot, Lorain, Potain, Lepine, Olliez, all ready to open a commission in Paris, and a subcommittee in Lyon, in order to concur in your plan of uniform observation.

This plan embraces the unity of clinical thermometers, thermometric scales, charts, &c.; a uniform graduation of the sphygmograph, nyograph, sphyrograph, æsthesiometer, monometer, globulimeter, ophthalmoscope, thermoscope, and other instruments of precision used in diagnoses; a uniform method of measuring and registering the hearing, the velocity of other sen-

sory impressions, the regularity of co-ordinate movements, as the walk, and a uniform registration of all clinical cases according to their kind.

Of this plan, the International Medical Congress, meeting at Brussels the 19th Sept., prox., proposes to carry out only the uniform measurement and record of hearing. It is, therefore, important that this Association be represented, in order to represent the original plan of uniformization of clinical observation."

The hour of 11 having arrived, according to previous resolution, Dr. S. D. Gross was called to address the Association. His subject was

Blood-Letting, which he styled "one of the lost arts." He commenced by briefly recounting the history of venesection, its uses and abuses. While physicians of a few generations back resorted to blood-letting as a specific remedy in the management of promiscuous diseases, the system had fallen gradually into disuse, until, at the present day, it was as much as a physician's reputation was worth to hazard the suggestion save as a topical agent. He thought that we should not assume to be so much wiser than our fathers, who had lent their approval to a custom that had been sanctioned by ages of experience. Might we not, in going to the opposite extreme, do violence to a principle that was really conservative in its nature? It was the extreme view taken either way that was likely to occasion untoward results. It was the fashion of the present day to decry this kind of practice, and, like many other fashions, it was founded upon ideas that would not stand the test of reasoning investigation. Even disease itself, in some form or other, had often become fashionable. An instance in point was that of Louis XIV, of France, who was afflicted with a loathsome disease, with which the people of his court soon became fashionably inflicted. There was as much tyranny exercised by the opinion of an eminent authority (eminent because it was *foreign*) in support of improbable or questionable medical views, as there was in the mandates of the queen of fashion, foremost among whom, in her time, was the Empress Eugenie, and to which every woman felt herself compelled to yield, or else forego her influence and standing in the fashionable world. So with a majority of the medical profession, who abandoned voluntarily—or felt compelled so to do—old and once cherished opinions in order that, by following new theories, they might not render themselves conspicuous by an adherence to the ancient regime. He said that the time was fast coming, if not already at hand, when a reaction would ensue, and the idle lancet be again resorted to as one of the main reliances in the treatment of many forms of disease, particularly

in the acute stages. History is constantly repeating itself, and knowledge runs in a circle. There were times to bleed, and times not to bleed, and these distinctions, wherein our fathers erred, we of this day and time are enabled to recognize readily and turn to valuable account. When we had acquired a more accurate knowledge of diseases, the tendency to run into extremes would be less characteristic of the profession, if not avoided altogether.

The substitute for the lancet now-a-days consisted in the administration of medicines that had a tendency to reduce the fulness, frequency and power of the heart's action, and the extreme use of these was more dangerous than the one decried. Women in child-bed had often lost immense quantities of blood, more than an old-time physician could ever think he had occasion to draw; hemorrhages from various causes, and the continued and immoderate use of the lancet, in many recorded cases, in which no more blood came away because there was too little left to run, could be cited, and yet recovery followed, and the life-current was speedily introduced under a nourishing and sustaining after-treatment.

The address was loudly applauded, and ordered to be printed.

The address of Dr. Austin Flint, Chairman of the Section on Practical Medicine, reviewed some recent researches regarding *Alcoholism*, *Motor Centres*, *New Remedial Agents*, *Transfusion of Blood*, *and the Natural History of Crime*. The changes of alcohol in the system, and its medicinal uses were dwelt upon at some length. Well-conducted experiments went to prove that when alcohol is taken into the system, the proportion excreted by the kidneys, lungs and skin is exceedingly small, the greater part being destroyed in the body. What becomes of it remains to be answered by farther experimental researches. Six hundred grains of absolute alcohol can be disposed of without injury to the bodily functions of a healthy adult during a day. It is accordingly employed in the treatment of many conditions of disease, though its use is not based upon any ascertained facts concerning its elimination.

Physiological investigations during the past year in relation to motor centres of the brain convolutions was then touched upon, and likewise with reference to newly-discovered remedial agents.

As to transfusion of blood, while there were many experiments performed in the transfusion of the blood of one animal into the veins of another of unlike genus, and of the blood of a lamb into the veins of a man, himself a physician, in one instance, there were certain curious results noticed, but nothing positive had been elaborated that would justify the positive ad-

vocacy of any reliable feature of theory of practice. The subject was not without promise, however, and afforded an ample field for any one whose zeal was equal to the task of an investigation, and which could hardly fail, eventually, to be of signal advantage to the profession.

The closing feature of the paper referred to the natural history of crime, in which the query was announced concerning the possible connection of individual tendencies to the commission of crime with corresponding diseased conditions. It was very ingeniously and elaborately put forth, together with the possibility of medical treatment for such conditions, under specific classifications, as in the case of real diseases. This, of course, implied a discussion of the responsibility for criminal acts, which should, however, offer no hindrance to enlightened investigation.

Thanks were voted Dr. Flint, and his address was properly referred, with instructions to be published.

Dr. J. M. Toner, Chairman of the Committee on the International Medical Association, recommended the sending of delegates to the convention to assemble at Brussels September, 1875, as the most expedient plan to meet the wants of this Association.

The committee appointed to select a die, with the portrait of Dr. N. S. Davis on one side and the name and date of the Association on the other, reported that they had arranged for the manufacture of the same in bronze at the Philadelphia mint. The report was received, and 200 medals, at $1 each, were ordered.

In the *Section on Practice*,* Dr. Moreau Morris, N. Y., read a paper on *Biometry in its Relations to the Practice of Medicine.*

Dr. Bartholow, Cincinnati, presented some practical observations upon **Ophthalmic Goitre and its Treatment,** in which he stated that in some cases all the symptoms may be absent except the excessive action of the heart and lack of co-ordination of the upper eye-lid, first described by De Graafe. He treated all the cases reported with good success by galvanization of the pneumogastric and sympathetic nerves.

Dr. N. S. Davis remarked that under his care several cases had done remarkably well under regulation of diet, careful outdoor exercise, and the internal use of compound syrup of the hypophosphites, taken after meals, and digitalis pushed at first sufficiently far to produce positive slowness of the pulse, and subsequently to keep the patient under an appreciable degree of influence, without getting the cumulative effect of the drug. If

*Reports of Sections after first day are compiled from *Medical Record.*

tonics are used, they should be selected with reference to avoiding excitation of the nervous system; if any other form of tonic be given, it should be associated with some sedative, to keep down the peculiar excitability which may be produced by the tonic used.

Dr. Octerloony, Louisville, read a paper on *Cystic Degeneration of the Kidneys.*

In the *Section on Surgery*, Dr. L. Elsberg, N. Y., presented a paper on *Œsophageal Auscultation.*

Dr. L, J. Willein, Terre Haute, Ind., read a report of a **Case of Hydro-Nephritis, Caused by the Formation of Stone in the Pelvis of the Kidney and Ureter**—the chief points of interest being (1) Reticence of the patient for many years, without suffering any irritation of the bladder or calculous nephritis; (2) Perseverance at work, with healthy digestion, until four weeks before his death; and (3) the little evidence of inflammation until the last two weeks of his life. Man, æt. 26, no family history, two years a cavalryman. Towards the end of his term, his horse fell on him; he recovered with the exception of a deep, dull, lumbar pain, and slight hematuria at times—the latter disappearing 4 years before death. Gradually enlarging abdomen was noticed in 1866. July, 1874, his back and left side were severely contused, which caused much pain; and a few minutes after, there was considerable hematuria, which lasted for two weeks. He then felt a goose-egg size tumor in the left side, very painful on pressure, and movable. Feb. 25, 1875.—Injured again. Left abdomen greatly distended by kidney-shaped tumor—marked out by palpation and percussion—extending 15 inches from the pubis to 6th intercostal space; lower transverse measurement, $10\frac{1}{2}$ inches; upper transverse, $7\frac{1}{2}$. Diagnosis: renal cystic degeneration. Tumor was opened 2 inches to right of crest of left ilium, by trocar, and gradually emptied of 8 pints of thin, inodorous, alkaline, chocolate-colored fluid, depositing a bloody-looking sediment. Sac refilled in a few days. March 10, punctured again; 6 pints of thin fluid withdrawn; then followed about a pint of a thick, grumous, gelatinous substance. On 18th, two pints of bloody pus were drawn. Circumscribed peritonitis ensued; death on 22d. *Autopsy* 24 hours after death. Great emaciation; skin yellow. Abdominal tumor was an enormous kidney with a portion of ureter; it had acquired such volume because of a large stone—over ℥j—in the pelvis, and a small one—ʒiij—near its cystic connection with the ureter—obstructing the urinary secretion. Adhesions over entire surface of tumor; ureter, renal artery and veins greatly dilated; glandular portion of kidney almost entirely destroyed.

Right kidney much increased in size, but of healthy appearance.

The Thermoscope devised by Dr. E. Seguin, N. Y., to determine slight degrees of heat was exhibited.

Third Day.—Drs. J. A. Adrian, E. E. Harwood, J. C. Hutchison, H. D. Holton, J. C. Hupp and H. R. Warner were appointed delegates to the International Medical Association at Brussels.

Dr. S. D. Seelye, Montgomery, Ala., offered $100. for the best essay on *Bright's Disease*, deemed worthy of a prize by a proper committee.

Drs. S. D. Gross, W. B. Atkinson, Pa.; Austin Flint, N. Y.; Willoughby Walling, Turner Anderson, Ky.; J. T. Hodgin, Mo.; L. C. Lane, Cal.; Wirt Johnston, Miss.; Wm. Brodie, Mich.; J. M. Toner, Washington, D. C.; F. D. Cunningham, Va.; E. T. Easley, Texas; E. Andrews, Ill.; H. I. Bowditch, Mass., and Roberts Bartholow, Ohio, were appointed delegates to the Canadian Medical Association, to convene at Halifax, Aug. 5, 1875.

A report by Dr. John P. Wall, Tampa, Fla., on the *Climatology, &c., of Florida*, was properly referred.

The Treasurer reported a balance of $3,022.41 in his hands. Owing to increased postal rates, the Transactions will be delivered at $6. instead of $5., as heretofore.

On presentation by Dr. J. Marion Sims, Chairman of the McDowell Memorial Fund Committee, it was resolved that members of the Association shall contribute annually such sums as they may think proper until $10,000 be accumulated, to be known as the "McDowell Memorial Fund," the interest on which shall be used as prizes for essays relating to ovarian diseases.

Dr. S. D. Gross subscribed $100.

The hour having arrived for Dr. E. M. Moore's (Rochester, N. Y.) address on

Transfusion of Blood, he stated that when first successfully performed it excited the highest hopes, and attracted the attention of the great, who predicted for it great therapeutic value. They, in their new-found zeal, almost imagined that death had been practically vanquished, and that youth would be insured to the aged and decrepid. But the practice in this early day did not fulfill expectations, and after a time, it ceased to be regarded as having any practical significance. More recently, the subject has been revived by an article from a celebrated physician in Geneva, who described the operation as practised in St. Petersburg, which had not only been attended with marked success, but had enlisted the attention of royalty itself, together with that of the most distinguished physicians of the Russian empire. The operation was designed for the relief of those losing blood

in battle, but soon became of more extended application, and old hopes soon became revived. Yet, our knowledge, even to the present time, concerning the therapeutic value of transfusion, is decidedly limited.

This operation was not a sudden discovery, but grew out of the experiments of Dr. Christopher Wren, in injecting medicinal substances into the veins, while this in turn grew ont of Harvey's discovery of the circulation of the blood, in the early part of the 17th century. In 1665, two continental physicians prosecuted a series of experiments upon the lower animals, in respect to blood transfusion, but without any notable degree of success. Laner, in the same year, connected the carotid artery of one dog with the jugular vein of another, and varied the operation at different times with respect to others; and, though not remarkably successful in these experiments, he thought, upon the whole, that he detected some results which were favorable to the theory. Another experimenter passed the blood of a calf into the veins of a dog; but such being an infringement upon the laws of nature, the result proved a failure.

The first operation in transfusion in the case of a human being occurred in Paris. A young man. æt. 16, who had been suffering two months from an obstinate fever, had introduced into his veins ℥viij of arterial blood from a lamb, and, notwithstanding the shock to his system, all unfavorable symptoms passed away, and he finally recovered. A man, æt 45, into whose veins were introduced ℥x of the arterial blood of a lamb, was not at all incommoded, and even went the next day to have the operation repeated. Another man, reduced by dysentery, was transfused with the blood of a calf, and revived in 24 hours; but when it was found necessary to repeat the process, such proved of no avail. Another case cited was that of an insane man, into whose veins were introduced at one time ℥x of the arterial blood of a calf, and at another ℥vj more. He seemed somewhat better, and a third transfusion was made, in which a larger quantity of blood was injected, and finally, upon recovering his reason, was supposed cured, but in a few days thereafter died.

But fatal experiences at length checked inquiry and enthusiasm in this direction, and as late as 1868 interest in transfusion had almost entirely disappeared.

In recounting later experiments, reference was made to the variety of procedure in such investigation, in which arterial blood was introduced into the veins, venous blood into the arteries, and each kind of fluid, with its fellow, as introduced from animals into the human system, and from one human being to another. Instances were also given in which defibrinated blood

was injected into both arteries and veins. Reference was also made to the direct admixture of the blood of one animal of different species or genus with that of another; but only in those nearest allied in species were the results favorable.

The danger attending the original experiments was the accidental introduction of air into the veins, the result of which, in all cases, is immediate death. Another drawback to success at that time was the coagulation of blood before it could be introduced from the veins of the donor to those of the recipients. Accordingly, the minds of those engaged in the matter were taxed to invent appliances by means of which these difficulties could be overcome. Improvements in this direction had gone on until at present the apparatus in use answers all practical purposes, and all liability to the accidental ingress of air into the veins is avoided, while it insures such a speedy transfer of blood from the donor to the recipient as effectually prevents any tendency to coagulation thereof. Engravings of several instruments were exhibited and explained by the lecturer.

To give some idea of the manner of using the instrument preferred by the speaker, two boys were seated on the stage, close together, one representing the donor, from whom the blood was to be taken, and the other the recipient of the life-giving fluid. The latter, however, must always occupy the recumbent position, and the former the sitting. The arms of both were extended and made to approximate to each other—the operator standing behind them, which is the position the surgeon should assume in this operation. First, the skin over the cephalic vein of the recipient must be clipped, to lay bare that vessel, which was to be further isolated from adhering tissues in order to be gotten at successfully. That of the donor was to be held in ready juxtaposition for the operation. The instrument consisted of a small silver tube four or five inches long, with a small gutta percha bag adjusted to an attachment at its centre. When one end of this instrument was introduced into the vein of the donor (the speedy filling of which was to be insured by a ligature above the bend of the arm), the bag would soon be filled with blood. The connection of this with the vein was then to be severed, and the contents of the bag introduced gently through the outer end of the instrument, which, in the meantime, was to be inserted into the bared vein of the recipient.

The paper was ordered to be published.

In the *Section on Practice, &c.*, Dr. Irwin, Mansfield, O., read a paper on **Alcohol in the Treatment of Acute Pnuemonia.** Of 147 cases reported, not a death occurred. The average attendance upon the patients was 5 days. He believed alcohol to

be as distinctly specific in acute pneumonia as quinine in intermittent fever. If destructive processes in the system are retarded, the demand for constructive assimilation will be proportionately diminished. If nutrition is deprived by one-half of its normal supply of oxygen by impermeability of the respiratory membrane, and if the disintegration of tissue can be proportionately diminished, the oxygen supply will still equal the demand; hence asphyxia cannot result. He believed that death occurs in pneumonia by asphyxia, dependent upon impermeability of the respiratory membrane. If now disintegration of tissue, which results in the production of carbonic acid gas, can be retarded sufficiently to diminish the demand for oxygen in the same proportion, it is the thing desired. Alcohol undoubtedly possesses such power; hence its applicability.

Dr. Eastman, Ind., thought there should have been more evidence, such as physical signs, than was given, in order to judge of the reliability of diagnosis.

Dr. Davis, Chicago, regarded the diagnosis as doubtful, as there was not a single death.

Dr. Yandell, Louisville, remarked that the success obtained surpassed all his powers of belief.

Dr. Flint, N. Y., sustained the criticisms.

Dr. Irwin replied that the exact symptoms of a certain stage of the disease was not necessary to be considered according to his theory. He was not at all surprised that the profession is astounded with the results of treatment. With regard to diagnosis, mistakes are hardly presumable in these days, where a man sees that number of cases, and it is not unreasonable to suppose that an active practitioner may see such a number within twelve years.

Dr. L. Elsberg, N. Y., read a paper on the **Bioplasson Doctrine**—a new biological doctrine. With microscopical and histological advance, the cell doctrine has undergone change, until now it would be not only erroneous in fact, but mischievous in practical consequences to adhere to it. He used diagrams to show the structure of the lowest form of animal life (amœba) found in organic infusions, &c.; and then the structure of human colorless corpuscles, as seen upon the heated stage of the microscope under varying circumstances. He examined a number of tissues to show that there existed throughout, instead of separate isolated cells, accumulations of living matter connected by a network of living matter. The whole animal body represents a mass of living matter, the denser accumulations of which, the former "cells," are connected by more delicate threads of the same, in the meshes of the network of which fluid or not living matter is contained, and in the vacuoles of which float

blood-corpuscles, pigment granules, &c. He prefers the word *bioplasson* to protoplasm to designate the simplest form of living formative matter.

Dr. A. D. Keyt, Cincinnati, exhibited a **New Sphygmograph,** constructed on the principle of utilizing elastic membrane and liquid, to receive and transmit to the writing lever the movements of the pulsating artery. Elastic membrane and liquid are so closely allied in physical properties to the arterial coats and blood as to render them very natural media for the purpose indicated. [Space does not allow a description of the instrument itself, which he believes to be a new one.]

In the *Surgical Section*, a committee was instructed to elaborate Dr. Gross' report on *Syphilis* (read last year), and to prepare a draft of a national law.

Dr. Link, Ind., read a paper on *Circular Amputation—Cup-shaped Stump—Treated as an Open Wound.* The advantages claimed are freedom from suppuration, absence of pain, and a comparatively short period for the healing process.

[We have been unable to find reports of the proceedings of the *Sections on Obstetrics* and *State Medicine* that would be at all profitable.]

Fourth Day.—The following were chosen trustees of the McDowell Memorial Fund: Drs. J. Marion Sims, chairman; W. L. Atlee, Phila.; W. H. Byford, Chicago; J. D. Jackson, Danville, Ky.; J. M. Keller, Louisville.

Election of Officers.—*President*, Dr. J. Marion Sims, New York; *Vice Presidents*, Drs. John D. Jackson, Ky.; Samuel Lilly, N. J.; N. Pinkney, U. S. army; S. D. Seeley, Alabama, *Treasurer*, Dr. Casper Wistar, Pa. *Librarian*, Dr. Wm. Lee, D. C. *Assistant Secretary*, Dr. R. J. Dunglison, Phila. *Committee on Arrangements*, Dr. Wm. Pepper, ch'mn.

Sections—Practice of Medicine, Materia Medica, & Physiolgy. Drs. F. G. Smith, Pa., ch'mn; B. A. Vaughan, Miss., sec'y; *Obstetrics & Diseases of Women*, Drs., Sam'l C. Busey, D. C., ch'mn; R. Battey, Ga., sec'y; *Surgery & Anatomy*, Drs. Alonzo Garcelon, Me., ch'mn; E. T. Easley, Texas, sec'y. *Medical Jurisprudence, Chemistry and Physiology*, Drs. E. L. Howard, Md., ch'mn; E. L. Hurlburt, Ill., sec'y. *State Medicine and Public Hygiene*, Drs. R. C. Kedzie, Mich., ch'mn; E. M. Hunt, N. J., sec'y.

The following were appointed representatives in this section from their respective States: Drs. J. B. Gaston, Ala., D. A. Linthicum, Ark.; T. M. Logan, Cal.; B. H. Cattlin, Conn.; L. B. Bush, Del.; F. Howard, D. C.; W. A. Love, Ga.; H. A. Johnson, Ill.; Geo. Sutton, Ind.; A. J. Fields, Iowa; D. G.

Mottram, Kan.; Turner Anderson, Ky.; S. M. Bemiss, La.; S. H. Weeks, Me.; James A. Stuart, Md.; H. I. Bowditch, Mass.; A. B. Stuart, Minn.; —— Armistead, Miss.; Frank G. Porter, Mo.; J. H. Peabody, Neb.; J. W. Parsons, N. H.; E. M. Hunt, N. J.; A. N. Bell, N. Y.; T. J. Quinn, O.; H. Bettinger, Oregon; Wm. F. Knox, Penn.; E. M. Snow, R. I.; R. A. Kinloch, S. C.; J. H. Vandiman, Tenn.; J. M. Fort, Texas; J. L. Cabell, Va.; A. T. Woodward, Vt.; H. P. Strong, Wis.; John Frissell, W. Va.; W. A. B. Norcom, N. C.; J. S. Billings, U. S. army; Jos. Wilson, U. S. navy.

Judicial Council.—The following were appointed to take the places of those whose terms have expired: Drs. L. S. Joynes, Va.; R. N. Todd, Ind.; Robt. Battey, Ga.; James E. Morgan, D. C.; Thomas B. Flaylor, N. J.; Silas N. Bentram, Penn.; A. Dunlap, Ohio.

Committee on Prize Essays—Drs. Samuel D. Gross, F. G. Smith, Alfred Stillé, E. Wallace, H. C. Wood—all of Pa.

Climatic Influences—Dr. Franklin Staples, Minn., was appointed to report on the influence of the Minnesota climate on pulmonary diseases; Dr. Charles Denison, in Colorado; Dr. E. T. Sabal, in Florida.

Dr. H. I. Bowditch, Boston, read a lengthy paper urging the establishment of State Boards of Health. He presented a resolution requiring that each year, until otherwise ordered, the President and the Permanent Secretary shall appeal, in the name of the Association, to the authorities of each State where no State Board exists, urging the establishment of such boards.

Prize Essay Committee made no award.

The U. S. Signal Service was requested to note daily, if possible, the amount of ozone in the atmosphere over different parts of the country.

Resolution by Dr. Westmoreland, Ga., urges Congress to increase army surgeons' pay.

Adjourned to meet in Philadelphia June 7th, 1876.

RICHMOND ACADEMY OF MEDICINE.

April 1st.—**Curative Processes of Consumption.**—Dr. M. L. James referred to the curative processes which sometimes occur in phthisis, and reported a case in illustration. A lady who has been under his charge for the past four years, has, during that time, given unmistakable evidences of pulmonary tuberculosis, which periodically during the warm seasons disappear. The evidences of tuberculosis have been a state of greatly impaired health, with febrile disturbance, night sweats, and more or less

complete suspension of the catamenia, attended by cough, sputa, at first a frothy mucus, then mucus more or less tenacious, depending on the amount of circumscribed pneumonia which existed at the time, with large amounts of pus in the later stages of an attack, and frequently moderate hemoptysis. Coincident with these symptoms, auscultation has revealed rude respiration, with prolonged expiration and circumscribed mucous clicks at the summits of both lungs, and gurgling rales of the finer grades, limited to spots. With alternations, varying according to circumstances, she has used cod-liver oil, whiskey, quinine, iron, chlorate of potash, and counter-irritation, and all with evident benefit. But while she has been thus benefitted by these remedies, there has clearly been a connexion between her improvement and the decline of the wintery season. A feature of especial interest in her case has been the obvious physical changes which have occurred in the tubercular masses, and their expectoration. About the time of the periodical occurrence of improvement each year she is accustomed to spit up whitish masses, some of which she submitted to the inspection of Dr. James. These he found to be greasy, chalky looking, friable concretions of irregular but generally roundish shape, from the size of a grain of wheat to that of a pea, which, when subjected to chemical analysis by Dr. Wm. H. Taylor, proved to be almost entirely calcareous.

Dr. James was satisfied that these concretions were the remains of the tubercular masses, the animal portions of which had been absorbed, leaving the mineral portions, in the form of these concretions, gradually to ulcerate their way into the bronchial tube and be spit up. After having gone through this process, the health of this lady has always improved, and the physical signs have shown almost complete disappearance of pulmonary trouble.

Dr. James expressed his purpose in the future to insist on her spending her winters in a more Southern latitude, to avoid the confinement incident to the inclemency of this, which in the case of this lady is so evidently injurious.

Dr. L. S. Joynes reported a case similar to that reported by Dr. James. The gentleman, a relative of his, who was phthisical, had been accustomed for many years at intervals to spit up these calcareous concretions, in large quantities. After a crop of tubercles had been thus expectorated, there was usually a season of decided improvement. He finally, however, succumbed to the force of the disease.

Dr. L. S. Joynes stated that a relative, previously of a good constitution, had whooping cough, followed by a troublesome cough, which was cured. Afterwards he "took cold," when the

cough returned, and continued until a calcareous concretion was expectorated. Perhaps a hundred such concretions were at different times coughed up, and the patient was as many times apparently cured.

Dr. J. B. McCaw said a young woman was brought to him by her father whose throat he was asked to examine. She was said to snore loudly. Her mother, brother and sister had died of consumption. Her tonsils were peculiarly mottled, and upon pressure, little seed-like concretions were extruded. These concretions were often hawked up. She was advised not to interfere with the tonsils, since they seemed to be acting as emunctories of tuberculous matter. When last heard from, the patient was in good health.

Dr. L. S. Joynes read a paper on the **Comparative Liability to Disease of the White and Black Races.**—(See page 153.)

Dr. F. B. Watkins believed that the well developed white laborer was *physically* superior to the well developed negro, though his intellectual superiority is oftentimes not marked. In the state of slavery in which he was at the South previous to the war, the negro was comparatively a healthy individual; now he seems to be peculiarly predisposed to tubercular troubles. He would inquire how could phthisis have become so developed in the blacks if the diathesis had not previously existed, though it was latent before they were emancipated. He regarded tuberculosis, cancer, and syphilis as diathetic diseases, and as having been originated at the time of man's creation, the manifestations of which have been developed or repressed according to the conditions under which people had lived. He does not think either of these diseases break out in an individual unless the germs of it were already in his system. [All other speakers held that tuberculosis can be developed *de novo* in persons who live under unhealthy influences.]

Dr. R. T. Coleman said that he regretted that he could not concur in Dr. Joynes's opinion of the excellence of the negro constitution. He had a soft place in his heart for the negro, and would like to believe that he was the peer of the white man in his ability to resist morbid influence and in his power of enduring disease, and that as a consequence the hope might be entertained that the negro would rise superior to the logical consequence of the "irrepressible conflict" which demands the supplanting of the inferior by the superior race. We of the South owe an immense debt of gratitude to the negro. Every characteristic of our people, by a rigid analysis, might be traced to the conservative influence of slavery. In view of such obligations to the negro, Dr. Coleman acknowledged his reluctance in ex-

pressing the conviction that the fate of the Indian would at no distant day be that of the negro—and this largely due to his defective vitality. The first influence mentioned in bringing about this result—the extinction of the negro race—was a moral cause; and the potency of moral influences in the prevention and cure of disease, he contended, could not be overestimated. He stated that it was not the wear and tear of body only but of mind and heart that shortened human life. The problem of life which the master had to solve before the war was how to furnish food, clothes, and shelter for his family during his life and make provision for it when he died. This problem was often most imperfectly solved, and the corrosion of mind and heart incident to the effort has filled many a premature grave. Not so with the slave; for him the problem was always successfully solved; he of necessity was provided with food, clothes, and shelter, and these were secured beyond a doubt to his family when he was taken away; for if one master could not provide them, the negroes passed into the hands of another master who could. Hence the slave took no thought for the morrow, but lived a happy life, free from care and responsibility, and thus often, in spite of an inferior constitution, greatly outlived his more highly organized owner. Not so now; the negro, like the white, has to solve this problem for himself, and with what poor success we already have some foreshadowings, although as yet the benign influence of slavery, still projecting itself over the destiny of these people, is yet ameliorating their condition. But even now, what do we see? Up to the time of the war in a large acquaintance with slave-owners, Dr. C. had never known of but three cases of lunacy among negroes, and to-day the Central Lunatic Asylum is crowded with them to overflowing. And as the negro gradually looses his hold, his dependence on the whites, and has to work out his own salvation, this evil must of necessity increase. Dr. C. having given the foregoing explanation of the longevity of the negroes urged by Dr. Joynes as an evidence of the equality of the constitution of the negro as compared to that of the white race, proceeded to combat the idea that the fecundity of the negro was, as alleged by Dr. J., necessarily an evidence of his superior vitality. Dr. C. contended that fecundity was often an evidence of physical weakness. In obedience to nature's law of compensation, numbers are often balanced against robustness. This he illustrated by the remarkable fruitfulness of tuberculous people. The robust forest tree weeds out undergrowth, while scrubs grow in thickets. With reference to the superior resistance of the colored race to malarious influences, Dr. C. admitted that they were much slower in yielding to this

influence, but contended that if they were once brought under it a much larger percentage of those attacked died than among the whites. He illustrated this view by the mortality in the yellow fever that prevailed at Wilmington, N. C., during the war. At first the victims of this scourge were confined almost exclusively to the whites, but towards the close of the epidemic the ravages among the blacks far exceeded anything that had occurred among the whites. Dr. C. contended that the colored race had almost universally a predisposition to tubercular diseases. This was not so obvious before the war as it is now and will be in the future; for the hog and hominy with which the negro was abundantly provided from his cradle to the grave, acted like cod liver oil, and thus neutralized to a large extent the tubercular diathesis. Dr. C. also contended that negroes are more liable to typhoid fever and its congeners than whites—almost all of their diseases taking this drift—and besides, they resisted these diseases much more poorly than the whites and were much less responsive to the treatment. These forms of disease, Dr. C. contended, were among the very most common in this country, and would play a potential part in the destruction of this race. Dr. C. having incidentally alluded to the greater prevalence of syphilitic disease among negroes, and the large destruction of infant life by unmarried negro mothers, not from any sense of shame, but to get rid of incumbrances—and an almost equal destruction of infant life by married negro women in cities, from want of judgment and thoughtlessness—concluded by reiterating the opinion that the white race that had planted the banners of civilization and high achievement throughout the world—and in doing so had withstood all changes of clime and temperature, except, perhaps, that of the negro's original home—was not only mentally and morally, but physically, the superior of the African.

Dr. C. hoped it would not be irrelevant to indulge in a speculation on the providence of God in permitting these Africans to be transplanted so far from their native country, and then to cut them adrift when they had reached, under the benignest system of servitude the world has ever known, a degree of advancement which this race has been unable to achieve under any other circumstances. Man cannot fathom God's infinite purposes; yet it cannot be wrong by reverentially searching to strive to find out the designs of God. May it not be that all these steps lead but to the great end of christianizing the world? White missionary labor has essayed this work in vain in Africa. The work must be done by colored missionaries, if done at all, and Inspiration teaches that it will be done. May we not, then, with the eye of faith, see in the future some higher type of this race

—some colored Moses, who, like the inspired seer on Pisgah's Mount, to whose enraptured vision were spread the fair fields of Canaan, luxuriant with ripening harvest and verdant plains, will direct the remnant of his people after their long wanderings, into this Spiritual Canaan, with its abundant harvest and its scarcity of laborers, and thus there shall be gathered these long-neglected sheaves for the Lord of the Harvest?

Dr. Hunter McGuire believed that the negro was inferior to the white man, morally and intellectually, as Dr. Joynes, in his very able paper, had conceded, but that he was also in this country inferior in his physical organization and vital force. He thought it probable the last was the result of the conditions and circumstances by which the negro was surrounded, as Dr. Joynes had suggested. He had recently read the last work of Sir Samuel Baker, who had spent so many years in Central Africa, and it was interesting to compare the reports of disease and mortality of that gentleman with the one furnished by Dr. Joynes. Sir Samuel states that small-pox and dysentery are prevalent and fatal; that typhoid fever, measles, whooping cough, scarlet fever, croup and diphtheria are unknown in Central Africa. He says he never saw a case of mania, nor ever met with more than one idiot in Central Africa; they never commit suicide, and never go mad; the women never give birth to cripples or monsters. In his enumeration of diseases, he does not even mention tuberculosis or scrofula. Compare his reports, which agree with those made by Livingston and Du Chailu, with those just stated by Dr. Joynes, and the conclusion is inevitable that contact with the white race produces physical deterioration in the negro. The fact is a sad one, but nevertheless true, that attempts to elevate the moral and intellectual condition of the negro produce proportionate physical deterioration. Dr. McGuire had called the attention of the profession to the effects of emancipation upon the physical condition of the negro, in an article published in October, 1867.* At that time he was visiting surgeon, for clinical purposes, of a hospital containing 500 beds filled with negro patients. Nearly every inmate of this hospital had evidences of scrofula or tubercle. No *post mortem* was made at this place or in the College dissecting rooms without showing the presence of this trouble. He had predicted then that scrofula and its "essential element," tubercle, would be a frightful cause for the rapid decrease of the negroes in this country. Before the war, scrofula was common enough in the negro: it was shown by the swollen glands, tumid belly, certain ophthalmias

**Richmond* (Va.) *Medical Journal*, October, 1867.

and cutaneous eruptions. The negro was disfigured but not disabled by it. Now, tubercular deposits took the place of simple scrofula. This resulted from a combination of causes. Fat bacon and corn bread were no longer the daily ration; the thick, warm, homespun clothing was now never seen; they had no restraint from intemperance and excess; the banjo, bones and fiddle are of the past, and laughter and music have given place to political and religious meetings. These causes, barely hinted at here, have developed a vice of constitution, tubercle, the very existence of which is not mentioned by Sir Samuel Baker in his account of the diseases of Central Africa, and, as far as his recollection served him, by other travelers in that country. He believed in the ultimate extinction of the African race in this country, and that it would be scarcely less rapid than it had been with the Indian race.

Dr. J. S. Wellford thought statistics settled this question—that the liability to sickness, and the percentage of mortality among negroes, are greater among negroes placed under similar hygienic conditions as the whites. He here stated some of the figures mentioned by Dr. McCaw in the foot-note on page 217.

Dr. J. B. McCaw said that the white race is acknowledged to be the superior of the negro in mental powers; *a priori*, the more intelligent man will take the better care of himself, and will therefore be less liable to disease. Dr McC. does not consider the census statistics of negro longevity worth much; negroes are famous for declaring themselves to be much older than they actually are. As for their greater fecundity, that was not to be questioned, since all mulatto and negro women engage in bearing children at the earliest age—there are no old maids among them. That negroes are not as often subjects of alcoholism is to be explained by their not being as susceptible to brain excitements, since their intellectual endowments are lower than those of the whites. Insanity is less frequent among the blacks for the same reason. The statistics which had been adduced regarding the mortality from various diseases were fallacious. Even the Richmond Board of Health reports are not accurate. He disputed the dogma that "figures cannot lie." Obtained without the most circumspect care, they certainly will lead to the most false conclusions. The Fauna, Flora and Races of men have been created differently for every clime. Transplanted to an uncongenial home, they do not flourish; but on their own grounds, are as strong and hardy as possible. This fact presents the reason why the negro is so liable to lung troubles and various inflammations here, while he laughs to scorn the yellow fever in his own zone. [The reader is referred to *Aitkens' Science & Practice of*

Medicine, 2d Amer. edition, 1866, chapter on *Acclimation*, vol. ii, pp. 1051–2, which we regret not having space to reprint in full.—Ed.] Yet, in spite of the climatic advantages in favor of the negro, and as a conclusive proof that the white man is his superior in physique, read the British Army Medical Statistics at the stations in the West India Islands.*

April 15.—**Iodoform** was the subject for discussion. Dr. F. D. Cunningham had used pills of iodoform and iron in neuralgia of the ovarian region, and, he thought, with benefit. As a local application to chancroids, it gave very satisfactory results.

Dr. C. Tompkins had used iodoform suppositories in a case of cancer uteri to allay pain, but the agent caused such burning pain as to cause him to discontinue the iodoform.

Dr. Edwards regarded iodoform one of the best applications for chancroids. He was pleased with its action in irritable erosions of the cervix uteri, but the iodoform should be diluted. About three months ago, he applied four grains of the powder to an ulcer on the neck of the womb of a colored woman, and allowed it to remain for 12 hours. The next day, the woman had intense peritonitis—perhaps metro-peritonitis, which was treated with opium. Pain and inflammatory symptoms subsided by the fifth day; finding the introduction of the finger tolerable, a desire to get a better idea of cause and sequence, led him to make a vaginal examination, when he found that the ulcer had healed; from that day to this she has had no leucorrhœa, which was previously very troublesome. When iodoform is used as an external remedy, a coating of collodion over the application will prevent the offensive odor; oil silk closely applied acts well. A solution in ether is form preferred.

Dr. J. N. Upshur called attention to Dr. E. R. Squibb's pamphlet on salicylic acid.

May 6.—**Health of the City** during April, according to the report of the committee, Dr. F. B. Watkins, chairman, was excellent.

*"Among *white* troops of the *Windward* and *Leeward Command*, the sickness is represented by 1112 admissions per 1000 of mean strength, and the mortality by 10.91 deaths per 1000. * * * * Among *black* troops, the sickness is represented by 915 admissions, and the mortality by 20.89 deaths per 1000 of mean strength. * * * * Tubercular diseases are most fatal to this class of troops, causing nearly one-third of all the deaths.

"The sickness in *Jamaica* among *white* troops is represented by 896 admissions per 1000 mean strength, and the mortality by 14.08 deaths. * * * * The most fatal diseases are *paroxysmal* and *continued* fevers. Among *black* troops, the sickness is represented by 1090 admissions, and the mortality by 28.61 deaths per 1000 of mean strength. * * * * Tubercular diseases and those of the respiratory system are the most fatal, causing upwards of two-fifths of all the deaths."—*Aitkens' Sci. & Prac. of Med.*, vol. ii, p. 1055–6, 2d Amer. Edit., 1866.

Uterine Polypus—Removal by Wire Ecraseur.—Dr. Hunter McGuire reported a case thus operated on without hemorrhage. The pedicle was short and two inches in diameter. In probably twenty cases in which he had operated, hemorrhage had usually been very slight.

Puerperal Convulsions and Death.*—Dr. Hunter McGuire reported that on Saturday night last, about 9 o'clock, he was called to a lady, probably 35 years old, who was seven months advanced in pregnancy. She had been confined to her house for three or four months in consequence of threatened miscarriage; labor pains and discharge of blood following the slightest exercise. She was a large, muscular and rather plethoric woman. He found her suffering from what appeared to be colic. The pain was paroxysmal, præcordial, and violent, and was the supposed result of a glass of ale which she had drunk during the day. She had vomited freely before his arrival, throwing up some milk which she had taken a few hours before. A mustard poultice was applied, and a mixture of ginger, camphor-water and soda was administered, but was at once rejected by the stomach. As the pain continued and miscarriage was feared, the Doctor gave the lady hypodermically five minims of Magendie's solution of morphia. This small dose was used because the patient was very susceptible to the influence of all medicines. He stated the dose employed (five minims) to the lady and her husband, because of his intention to repeat the injection if she was not relieved. He noticed some œdema about the lady's face, which the husband ascribed to the retching and vomiting. He has since learned from the family that she was kept awake the whole of the previous Thursday night by pain in the head. In about twenty minutes after the hypodermic administration she expressed herself relieved from the pain, and the Doctor left, after directing a mixture of ginger, soda and a few drops of chloroform to be obtained, and given if the pains returned. At 12 o'clock that night Dr. McGuire was again sent for to see this lady, but being out of the way he did not get there until $2\frac{1}{2}$ o'clock, when he found her dead. He obtained the following history from her husband (a very intelligent gentleman) and others in attendance upon her. For probably three-quarters of an hour after he left, the patient remained so quiet that her husband thought her asleep; at the end of this time she moved and he spoke to her; she said she had not been asleep, but felt so quiet and composed that she was content to keep still. The Doctor was under the impression that her husband supposed she had

*Drs. McGuire and Wellford have each revised the reports here given of their speeches.

slept, but was unconscious of it. She complained of her head, and asked for some bay rum to bathe it with; she talked to her husband about other things, and at last begged him to get a pillow and lie down, that there was no necessity for his sitting up any longer with her. Probably about twenty minutes after this he was aroused by her stertorous breathing; when he got to her he found her in a semi-comatose condition, from which he aroused her with difficulty. When she awoke she was frightened, complained of her head, and was trembling violently, said she could not hold herself still, and immediately after this had a convulsion. As soon as the convulsion ceased the husband left her to summon the servants, and send for Dr. McGuire and any physicians in the neighborhood. When he returned he found her unconscious and with stertorous breathing. Soon after this Dr. Charles Macgill arrived. Although in a semi-comatose condition she was sufficiently aroused when he came in to recognize and speak to him. Dr. Macgill gave her an enama of assafœtida, ℥j, which was quickly obtained from a druggist in the neighborhood; he also gave her aromatic spirits of ammonia. In a short time after this was done another convulsion came on much more violent and of longer duration than the first. The muscles of her face and trunk and limbs violently contracted; there was for a time some opisthotonos. Her respiration was broken and stertorous. Foam issued from her mouth, and along with it blood from the lacerations of her cheek and tongue. The muscular rigidity was succeeded by jerking of limbs and face. This convulsion was followed by coma. Soon after this Dr. J. S. Wellford arrived, when, at his instance, the ounce of assafœtida was repeated, and as soon as it could be gotten an injection made of a solution of caffeine. A solution of atropia was sent for but arrived after the lady's death. When Dr. W. arrived both pupils were contracted; a short time before death one pupil dilated, the other remaining contracted.

Dr. O. Fairfax remarked that he had known large doses of camphor to produce spasms.

Dr. Charles Macgill stated that he was satisfied, from the symptoms as he saw them in the lady whose case has been reported by Dr. McGuire, that she was laboring under the effects of morphia. The pupils were obliterated to pin-points.

Dr. J. S. Wellford stated that he considered the case in every respect exceptional. When he arrived, a short time before her death, her condition was as follows: Pulse about 70, weak, slow and failing; stertorous respiration; inspirations not more than 8 or 10 to the minute; coma so profound that she could not be aroused by any means; pupils contracted to pin-points. This,

with the antecedent history furnished him that she had slept after the injection, then aroused, and afterwards fell into a comatose condition, and the convulsions had occurred with this initial stertorous coma, without any appearance of œdema in the lower extremities, or apparent uterine disturbance, inclined him to the belief that the morphia, through some idiosyncrasy, had caused the condition in which he found her. On any other theory she was then moribund, but remembering the apparently hopeless situations from which some persons are rescued in opium poisoning, he hoped that perhaps a stimulant treatment for a few hours might relieve her. One grain of caffeine was injected in left leg and in a few moments the left pupil dilated; another grain was 15 minutes afterwards injected in the right leg, when soon afterwards the right eye dilated, but that was attributed to the relaxation immediately preceding dissolution. A solution of atropia and the galvanic battery were sent for, but before they were brought she was dead. In considering this case, we are met by difficulties on either hand. Regarding it as he did, as a case of opium poisoning, the first difficulty is the small quantity of morphia used, which should not be at all dangerous in ordinary circumstances. Still we know that some idiosyncrasies are remarkbly intolerant of opium in any form and in any dose. In the report of the Medico-Chirurgical Society of London on *Hypodermic Injections,* we find two cases of death from half grain of morphia, and one case where one-quarter, and another where one-third of a grain produced symptoms requiring the most active treatment to ward off a fatal termination. Harley (*Old Vegetable Neurotics*), one of the most recent and reliable authors on this subject, relates cases of the hypodermic injection of morphia, where 1-15, 1-12, 1-7 of a grain, and even 6 minims of laudanum, produced such symptoms as indicated great disturbance of the nervous system and even danger. He also lays down the rule where small doses produce certain symptoms, larger doses will always in the same individuals cause the same only in greater intensity. Now this lady was not only very susceptible to all medicines, but, he was informed, especially suffered from opium whenever administered. Harley then, as if describing this very case, sums up in the following quotation: "And amongst women, individuals of a highly emotional, excitable, and energetic temperament are those to whom opium in any form is a very distressing remedy, and when hypodermically used, a most dangerous one." Now in this case, believing the presence of this idosyncrasy, aggravated by her long confinement to the house (four months), the anxiety relative to miscarriage, the presence of pregnancy itself, the increased activity of all drugs

when hypodermically used, (Austie states it to be three or four times as active), he thought that the effect of the small dose could be readily accounted for. Besides, we have recorded one death in a man from 4 grains of opium by the stomach, when, remembering the relative strength of morphia and opium, and multiplying that by the maximum increase stated by Austie, we very closely approximate that amount. Again, Harley states one case (page 197) in a horse where one-fourth grain of atropia used hypodermically produced as much effect as 4 grains dissolved in a pint of water, or 480 grains of the extract of the root or leaves administered by the mouth. Dr. W. also remarked with regard to puerperal eclampsia, that it is entirely exceptional that it should come on without some prodromic symptoms which would have been detected; that while in chronic cases of Bright's disease the coma may precede the convulsions, in eclampsia the reverse is undoubtedly the rule; that while Barker reports two cases where the pupils were contracted, most if not all other authorities state that the pupils are more or less dilated unless effusion or hemorrhage occurs. Again, most authorities object to the use of opium in eclampsia, certainly before depletion, for fear fatal narcotism may be produced by the congestive effect of the remedy in a brain already overpowered by the contamination of the blood.

Dr. R. T. Coleman believed this to be a case of puerperal convulsions—not of opium poisoning. The absence of œdema is no proof that the patient was not laboring under uræmia. True, opium does contract the pupils, and they are usually dilated in puerperal convulsions, but there are exceptions, as he can testify from his own experience. He has seen violent convulsions ensue in puerperal cases where there was only slight puffiness of the eyelids and back of the hands. Indeed, even where there is no puffiness of these parts and no albuminuria, the nervous state of the plethoric puerperal woman renders her peculiarly liable to be thrown into convulsions by the most trivial causes, such as occurred in the case under discussion. He had over and over again seen puerperal convulsions preceded by the præcordial pain here described. The cry of the patient is, first, "Oh, my stomach!" and then soon afterwards, "Oh, my head!" Such convulsions, however, cannot be anticipated with any degree of certainty. There was certainly no sin of commission on the part of the physician in this case. It was impossible, he thought, for one-sixth of a grain of morphia to produce so serious a result. Possibly the action of an emetic and venesection might have been of some service in averting the sad termination of this lady's life.

Dr. J. B. McCaw had had the misfortune to meet with cases

of puerperal convulsions like that described by Dr. McGuire, with the exception that no opium—no medicine, indeed—had been used. Dr. McGuire will remember the case of a lady living near him, under Dr. McC.'s care, who ate a small piece of watermelon at 11 P. M., had violent colic at midnight, convulsions at 1 A. M., and was dead at 3 A. M. This lady was also at her seventh month of pregnancy. He had learned to dread in the pregnant woman the development of abdominal cramps, followed by præcordial pain and preceded or attended by headache. The number of convulsions which may occur in any given case is not a measure of the gravity of the condition. He related some cases which had come under his own observation confirmatory of the above remarks in which no opiate had been given. In following out the history of the salient points in the case before the Academy, the intensely nervous temperament of the patient, the taking of crude ingesta in the afternoon, the development of the abdominal cramps which soon developed into præcordial pain, and in a short while mounted to the head, increasing the headache, the occurrence of vomiting, &c.—the sequence, in short, of cause and effect, led him to the belief that this was a case of puerperal convulsions. As for the contracted pupils, he had several times seen them in such convulsions. The patient died too soon for dilatation to occur.

Dr. W. W. Parker did not think that the small dose of morphia given had anything to do with the death of this lady. He had seen exactly such convulsions when no form of opium had been given. He recalls just now that he was called about two years ago to a man who complained of severe temporal pain, which was relieved when the patient went near the fire and became thoroughly warmed. Previously the man had had no convulsions. The Doctor gave no morphia, but ordered salts, and left without any apprehension of serious results. After several hours he was recalled to find that his patient had had a slight convulsion, and was dead. The symptoms, as described to him by the family, were so similar in character to those which mark the case of this lady that they seem to be due pretty much to the same conditions of the brain. Had he have given opium, that remedy would probably have been made to bear the blame.

Dr. L. B. Edwards thought the case one primarily of reflex irritation—an illustrative case of what has been styled "puerperal epilepsy"; that is, the occurrence of epileptiform convulsions, not necessarily dependent upon albuminuria or renal trouble, but due primarily to uterine irritation. This condition by reflex action irritated the base of the brain, and gave rise to convulsions. Such irritation not unfrequently causes contraction of

the pupils. At length, as the result of the convulsion, either rapid effusion of serum or cerebral hemorrhage occurred on one side, which caused dilatation of one pupil, while the other pupil remained simply under the influence of the reflex irritation. The caffeine injected in the thigh, in his opinion, had nothing to do with the dilatation of the pupil unless indirectly. In fact the physiological action of caffeine, as stated by Dr. Alexander Bennett* after a series of experiments, is usually to contract the pupil.

Dr. Parker remarked, another proof that the dilatation was not the result of the caffeine, was found in the fact that the dilatation occurred too soon after the injection—in less than half a minute. Morphia when injected in the extremities is not so rapid in its action.

Dr. James Beale remarked the views he entertained had been so fully stated that he would only add that he believed the case to have been one of puerperal convulsions, followed by effusion on one side of the brain, which was the immediate cause of death.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

The 22d annual session convened in the town of Wilson, *May* 18, 1875, Dr. J. W. Jones (Tarboro), President, in the chair; Dr. Jas. McKee, (Raleigh), Secretary. Prayer by Rev. Mr. Wood, of the M. E. Church, South. Notwithstanding the centennial celebration at Charlotte, N. C., about 45 members attended during the session.

The address of welcome on the part of the town was delivered by Rev. Wm. Hooper, D. D., which, though a little too lengthy for such an occasion, was yet full of interest and pleasantry. This address was appropriately acknowledged by the President.

On motion, thanks were voted Dr. Hooper, and he was invited to attend the meetings of the present session.

Dr. L. B. Edwards, the only delegate present from the Va. Med. Society, was introduced, and throughout the entire session was shown every possible courtesy.

The several Committees on Finance, Business, &c., were appointed, after which the meeting adjourned until 9 o'clock to-morrow morning.

May 19—*Morning.*—On motion of Dr. M. Whitehead (Salisbury), the Committee on Credentials was enlarged to six. Drs. F. Duffy, C. T. Murphy and R. J. Hicks were appointed.

Dr. P. E. Hines announced, in a few feeling remarks, the death of Dr. Wm. H. McKee, of Raleigh, on April 24th, 1875. He was one of the founders of the Society; was its first Secretary; was afterwards made President, and down to the time of his death he was one of its most ardent supporters. Hence the Society should pay more than an ordinary tribute of respect to his memory. He did not have early professional advantages. He commenced life as a druggist, but afterwards attended lectures in Philadelphia. He returned to Raleigh, where his life was spent in such a manner as to furnish an example worthy of emulation. He was the founder of the Raleigh Academy of Medicine, and was a zealous member. He was a man of charitable disposition, always kind to the younger members of the profession, and courteous to all. He had none of the lesser jealousies which belong to

Edinburg Med. Jour., Oct., 2873.

some practitioners. He was beloved by the profession and the community. Never was there such demonstration of grief on the part of the citizens of Raleigh for the past 35 years as on the occasion of Dr. McKee's death.

On motion of Dr. S. S. Satchwell, a committee of three was ordered to prepare a suitable memoir. Drs. Satchwell, Hines and Payne were appointed, who, after a few minutes' absence, returned and reported through Dr. Satchwell a preamble and series of resolutions expressive of grief at the demise of Dr. McKee. He also read a very excellent memoir which he had prepared for this meeting.

On motion of Dr. Murphy, it was ordered that the resolutions and the memoir be spread upon the minutes, and that the Raleigh papers be requested to publish them.

On further motion by Dr. Hines, it was ordered that 500 copies of the resolutions and memoir be printed in pamphlet form and appropriately distributed throughout the State.*

The President appointed Drs. O'Hagan, Satchwell, Hicks, E. B. Haywood, Hines, Chas. Duffy, W. A. B. Norcom, Stith, Wood and Foote as delegates to next session of the Association of Medical Officers of the Confederate States Army and Navy, to convene in Richmond, 11 A. M., Tuesday, October 19th, 1875.

To the 6th Annual Session of the Medical Society of Virginia, to convene in Richmond, 7½ P. M., Wednesday, October 20th, 1875—Drs. Whitehead, Payne, Rountree, Hyatt, J. McKee, Summerell, Enniss, Winborne, Willis Alston and Bahnsen.

To the 26th Annual Session of the South Carolina Medical Association, to convene in Charleston, April —, 1876—Drs. Pitman, Gibson and Smith.

To the 29th Annual Session of the Medical Association of the State of Alabama, to convene in Mobile on the 2d Tuesday in April, 1876—Drs. T. S. Duffy, Sharp and Patterson.

The Secretary read letters from Drs. A. G. Tebault, of Virginia, and W. R. Sharp, Davie Co., N. C,, regretting inability to attend.

The Committee to Nominate Officers for ensuing term reported—Drs. P. E. Hines, Raleigh, *President*; J. H. Baker, Tarboro, G. G. Smith, Concord, T. D. Haigh, Fayetteville, and J. K. Hall, Greensboro, *Vice Presidents*; James McKee, Raleigh, *Secretary*; H. T. Bahnsen, Salem, *Treasurer*; Willis Allston, Littleton, *Orator*. Delegates to American Medical Association, to convene in Philadelphia 1876—Drs. W. J. Pitman, Tarboro; W. A. B. Norcom, Edenton; E. B. Haywood, Raleigh, and J. J. Summerell, Salisbury. Alternates—Drs. H. W. Faison, Faison; R. H. Winborne, Edenton; G. A. Foote, Warrenton, and R. L. Payne, Lexington.

Dr. Little, of Raleigh, stated that Dr. Wm. G. Hill is preparing a memoir of Dr. Wm. H. McKee, and moved that it be published in the pamphlet containing the memoir, &c., by Dr. Satchwell. Carried.

Dr. Pitman, from the Necrological Committee, reported the death, from organic heart disease, of Honorary Member, Dr. Phillips.

Drs. R. L. Payne and H. T. Bahnsen, as delegates to the Medical Society of Virginia, reported that they were hospitably received, &c. [The part they took in the proceedings did credit to themselves and to the State that sent them, and also added materially to the interest of the session. The editor hopes the playful remark he made at Wilson relating to Dr. P. will be pardoned.]

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*The editor cannot permit the occasion to pass without expressing his sincere regret at the death of Dr. McKee, and without offering his sympathies to the friends of the deceased. In the editor's family, Dr. McK's name has become a household word because of valuable professional services rendered more than 30 years ago. Though he was not in the habit of contributing to the pages of medical journals, his professional ability and reputation were not limited by State lines, but were recognized by all who knew him, either in person or by name. In the death of Dr. McK., the State of North Carolina and the South has lost one of its best physicians and purest citizens.

On motion of Dr. A. G. Carr, the Secretary was instructed to distribute 3 copies of the memoir of Dr. Wm. H. McKee to each member.

On motion by Dr. Bahnsen to appoint a committee to revise the order of business, the Chair appointed Drs. Hines, Bahnsen and James McKee.

Dr. W. A. B. Norcom moved that a committee be annually appointed to select a subject for general discussion at the next session, and to nominate a leader, whose duty it shall be to prepare a paper to be read as the basis of such discussion. Carried. Drs. T. S. Duffy, Bahnsen and Patterson were appointed as the committee.

Dr. P. E. Hines made a verbal report of a *Case of Frotrusion of the Bladder during Labor*, which so filled up the mouth of the vagina as to prevent the birth of the fœtus. After ineffectual efforts at reposition and catheterization, the bladder was punctured, urine allowed to escape, and then the bladder was readily replaced. Labor progressed normally, and the woman made a good recovery.

Dr. R. L. Payne read a very interesting report of two cases: (1) *Uræmic Convulsions*, showing the benefit of venesection, and (2) *Post Partum Hemorrhage*. These reports elicited an interesting discussion, participated in by Drs. Hines, Foote, Satchwell, Hicks, Norcom, Whitehead and Bahnsen.

At the *afternoon session*, Dr. Bahnsen reported the case of a man who had 3 times been under the influence of *chloroform* for a surgical operation, and each time with a nearly fatal result. He was afterwards etherized in 13 minutes without difficulty, and kept anæsthetized for nearly two hours without unpleasant symptom. He also reported the case of a woman with *puerperal convulsions*, whose pulse was above 190 for nearly 30 hours. The pulse was easily counted because of the distinctness of each beat. This fact was verified by three other regular physicians who saw the case.

Dr. Pitman reported as delegate to the American Medical Association, and presented a copy of the proceedings.

Dr. M. Whitehead read a report of a case of *Hypertrophic Elongation of the Lips of the Womb*. The cervix protruded beyond the vulva, and had at first sight the appearance of the testicles in the male. To illustrate somewhat the appearance, he exhibited a drawing taken from some advance sheets of Prof. Byford's (Chicago) forthcoming work. Amputation of the cervix was performed, and the woman recovered. He also reported a case of *Hydrocele in the Female*; and a case of *Fistula in Ano* in which the elastic ligature was used very satisfactorily.

Dr. Whitehead also read a paper prepared by Dr. J. J. Summerell, detailing the results of *Treatment of Acute Articular Rheumatism by Insulations of the Beds*. Glass insulators under the feet of the beds was the plan adopted. The record of his cases showed that patients were rarely confined more than 5 or 6 days before convalescence was established. Dr. Summerell's paper also reported a most remarkable restoration of the scrotum, a part of which had been destroyed.

Dr. T. S. Duffy (Rutherfordton) read a suggestive paper on the *Treatment of Typhoid Fever by Cold Water Douches*. The patient is taken out of bed, stripped, and seated in a chair. Basins of cold water are then dashed upon the subject. The recommendation was supported by the details of some 15 or 20 cases, in all of which marked benefit was the result. Of this number there was, however, one death, but that seemed in no way dependent upon the plan of treatment. On the contrary, death was delayed by the douches.

On motion of Dr. S. S. Satchwell, a committee was appointed to appeal to the State Convention (soon to meet to suggest some new legislation) to recommend a law to enable physicians to collect their fees more satisfactorily than the present law allows. Drs. Satchwell, Hall, Murphy, Little, Hines and E. B. Haywood were appointed.

The Finance Committee reported $137. in the treasury, and fixed the annual assessment *per capita* at $3.

[CONTINUED ON PAGE 228.]

MORTUARY STATISTICS OF SOUTHERN CITIES FOR APRIL, 1875.

NORFOLK.—Very healthy.

LYNCHBURG.—"Reason to believe several marked 'unknown' died of consumption."

MOBILE.—Three deaths among Creoles—all that occurred among them—are included under head of colored. "The Board of Health have again obtained control of the Health Department of the city, and have elected a competent Health Officer—Dr. T. S. Scales. We hope to keep the Yellow Fever out this summer."

(Compiled from Reports of the several City Boards of Health.)

Cities	RICHMOND, VA.				NORFOLK, VA.				LYNCHB'G, VA.				MOBILE, ALA.				SELMA, ALA.				ATLANTA, GA.			
Health Officers, ...Doctors	J. G. Cabell.				Wm. M. Wilson.				R. S. Payne.				W. D. Bizzell.				John P. Furniss.				E. L. Connally.			
Population	Census Feb., 1874, though estimated at 65, 00.				Estimated.				Estimated.				Census 1870. In addition 1,200 Creoles are estimated				Estimated.				Census 1873, tho' estimate is 35,000.			
	White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
	33,452		27,213		13,500		9,000		7,000		7,000		18,115		13,919		3,500		4,000		18,526		11,607	
Sex	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Number of deaths	23	21	38	30	13	9	5	8	5	1	13	13	17	14	18	26	3	1	5	6	6	1	15	18
Number still-born in addition	12		7		1		1		2		7		1		6		1		5		2		4	
Ages. Ages unknown not calculated. Under 1 year	3		21		3		6		....		10		5		10		1		5		1		10	
" 3 years	2		2		4		...		...		3		..		4		...		....		1		5	
" 10 "	3		4		1		...		1		2		1		5		....		1		...		3	
" 20 "	2		4		...		...		1		1		3		4		....		...		...		4	
" 30 "	2		1		4		3		1		5		6		3		...		4		2		1	
" 40 "	10		10		3		...		...		2		4		5		1		...		...		5	
" 50 "	6		5		3		1		2		2		2		4		...		...		1		3	
" 60 "	4		4		2		..		...		...		7		5		...		1		...		1	
" 70 "	4		6		2		1		1		...		1		3		2		...		1		...	
" 80 "	7		5		...		2		...		1		2		...		....		...		...		...	
" 90 "	1		4		...		...		...		....		...		1		...		...		1		1	
" 100 "	...		1		...		...		...		....		...		...		...		...		...		...	
Over 100 "	...		...		...		...		...		...		...		...		...		...		...		...	

CAUSES OF DEATH.

Abscess	.....	.....	.....	.....	.....	1	2	.....	.....	.....	.....	1
Accidents, Suicides, Wounds, &c	4	5	.....	.....	1	.....	3	4	.....	1	2	.....
Alcoholism, Delir. Tremens, Intemp'nce	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Apoplexy	4	2	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Ascites and Dropsy	.....	1	.....	.....	.....	1	.....	.....	1	.....	.....	2
Asthma	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Birth, Premature	.....	3	.....	.....	.....	....	1	.....	.....	.....	.....	.....
Brain Softening, &c	3	1	1	.....	.....	.....	1	.....	1	.....	.....	1
Bright's Disease	.....	.....	.....	.....	1	1	.....	1	.....	.....	.....	.....
Bronchitis	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Cancer	.....	2	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Childbirth	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cholera Morbus	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Congestion of Lungs	.....	1	.....	.....	.....	1	.....	.....	.....	1	1	.....
Consumption	12	11	8	2	1	4	3	8	1	3	1	3
Convulsions	.....	.....	.....	1	.....	.....	1	4	.....	.....	.....	.....
Diarrhœa & Dysentery	2	.....	.....	.....	.....	.....	.....	1	.....	1	1	3
Diphtheria	.....	1	1	.....	.....	.....	1	.....	.....	.....	.....	.....
Eczema Rubrum	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Enteritis and Gastro-Enteritis	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....
Epilepsy	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Erysipelas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Fever, Congestive	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
" Hectic	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	...
" Intermittent	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
" Typhoid	1	.....	1	1	.....	.....	.....	1	.....	.....	.....	1
Gastric Ulcer	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Heart Disease	3	8	3	1	.....	.....	3	2	.....	1	.....	.....
Hydrocephalus	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inanition, Debility, Old Age, &c	1	8	3	4	1	.....	3	3	.....	.....	.....	1
Intussusception	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Jaundice	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Meningitis	3	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
" Cereb. Spinal	.....	.....	.....	.....	1	3	.....	1	.....	.....	.....	.....
Nephritis	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Paralysis	1	.....	.....	.....	1	1	1	.....	.....	.....	.....	.....
Peritonitis	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pneumonia	5	7	2	2	1	3	1	1	.....	1	.....	8
Pyæmia	.....	1	.....	.....	.....	...	.....	.....	.....	.....	.....	.....
Rheumatism	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Scrofula	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Small-pox	.....	.....	.....	.....	.....	.....	2	8	.....	.....	.....	.....
Spina Bifida	.....	1	.....	.....	.....	.....	....	.....	.....	.....	.....	.....
Tabes Mesenterica	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Teething	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Tonsilitis Maligna	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Trismus Nascentium	1	.....	.....	1	.....	.....	.....	3	.....	.....	.....	.....
Unknown or Ill-Defined	1	10	.....	.....	.....	9	1	1	.....	.....	.....	7
Whooping Cough with Bronchitis	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....

Dr. L. J. Picot, Littleton, reported a case of *Strychnia Poisoning* successfully treated by hypodermic use of three grains of morphia. The exact amount of strychnia taken is not known, though it amounted certainly to several grains.

Drs. Faison and Porter made verbal reports of other cases of strychnia poisoning which they had successfully treated with chloral.

Dr. H. O. Hyatt, Kinston, reported (1) a case of *Tetanus* treated by chloral and calabar bean; (2) one of *Retained Menstrual Blood;* (3) one of *Pelvic Cellulitis;* (4) one of *Ovariotomy*, and (5) two of *Vaginal Aspiration of Ovarian Tumors*—all successfully treated.

At night, a large audience of ladies and gentlemen assembled to hear Dr. R. J. Hicks' address on *Some of the Errors, as Opposed to the Triumphs of Medical Science*, after which the meeting adjourned to enjoy the hospitality of the citizens of Wilson, who had arranged for a ball at Mamona Hall.

Third Day—Morning.—After the inauguration of the officers-elect, Dr. J. W. Jones, as President, proceeded to deliver his address—his subject being *Man in his Primeval State.*

Dr. Francis Duffy reported a case of a *Peculiar Cerebral Lesion due to Syphilis.*

Dr. Thos. F. Wood, Wilmington, read an essay on the *Sources and Natural History of Vaccine Disease*—supplementary to a paper read by him in Tarboro, 1867.

On motion of Dr. Haigh, Fayetteville was selected as the place for next meeting on the first Wednesday of May, 1876.

Dr. T. S. Duffy, from the Committee on Questions for Discussion at the next session, announced *Puerperal Convulsions* as the subject, and Dr. W. A. B. Norcom as the leader.

Dr. F. M. Patterson offered resolutions appropriate to the centennial celebration now going on at Charlotte, in which it was stated that a physician of eminence in his day—Dr. Ephraim Brevard—was one of the framers and signers of the noted *Mecklenburg County Declaration of Independence.*

Usual thanks were voted. Adjourned.

[We have over and over again unanimously voted thanks to the profession of N. C. for courtesies shown us—and especially to the family whose unstinted hospitalities and agreeable company we enjoyed during our long-to-be-remembered visit to Wilson.—Ed.]

Editorial.

The Pressure upon our Columns has made it necessary to abbreviate notes, and to use small type in the report of the proceedings of the late session of the Medical Society of North Carolina. We regret also having been compelled to omit entirely the proceedings of the Baltimore Medical and Surgical Society, which, however, will appear in our next issue. The great interest just at this time of the important subjects discussed in the Richmond Academy of Medicine has induced us to present the full reports at once.

Typographical.—Page 199, 18th line from top, read *Extrophy* for Atrophy. Dr. Cyrus B. King was the operator.

VIRGINIA
MEDICAL MONTHLY.

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Original Communications.

ART. I.—*Select Cases in Midwifery, with Incidental Remarks.* By ALFRED G. TEBAULT, M. D., Late President and Honorary Fellow Medical Society of Virginia, etc., London Bridge, Va.

CASE I.—*Prolapse of the Uterus, with Adherent Placenta.*—My attendance was requested to a middle-aged lady immediately after the delivery of her third child, a male, which had taken place under the superintendence of a midwife. Found her lying in bed on the back, with her limbs wide apart; her countenance was pallid, haggard, anxious and depressed; she was feverish; subject to muscular tremors, and suffering from what she described as severe dragging pains extending downward from the lumbar to the hypogastric region; said something unusual was coming from her. On examination, the womb was found prolapsed, and lying almost entirely without the vulva, between the thighs. It presented a tumor about five inches in length, with the os tincæ at the apex. The lips of this orifice were thick, nodulated, rigid and unyielding. Within them was grasped a portion of the placenta, which was still adherent to the uterine cavity, while the rest of the placenta was deposited immediately below in a receptacle. The anterior *cul de sac* of the vagina was barely not obliterated. There had been no unusual show of blood, either in the delivery or since. The placenta was removed with little difficulty, with the simple precaution to guard against any possible inversion, and the uterus was carefully returned by taxis into the pelvis. When it had reached the axis of the superior straight, it passed upwards with some-

what of a sudden jerk, to the great relief of the patient. Under the use of cold applications to the vagina, bandaging and an anodyne treatment, she did well, without any other ailment than slight after pains. She was strictly forbidden the erect position till a full contraction of the parts had taken place, and no prolapse of the womb followed her lying-in. The exact cause of the displacement could not be ascertained, but might be inferred from the fact that she had never been subject to procidentia or prolapsus uteri.

Case II.—*Delivery in an Erect Position—Rupture of the Umbilical Cord at the Placenta.*—A. J., æt. 17 years, a victim of seduction, was taken in natural labor at night, on the 15th February. The birth of a living infant took place in a standing posture, on the recommendation of the ignorant though kind-hearted attendants among whom she had sought refuge. On the expulsion of the child without any attempt to support it or the maternal parts, its weight parted the cord at its insertion into the placenta, bringing along with it a small fragment of membranes. A gush of blood ensued, but eventually ceased on the prompt incursion of pains, which continued to annoy her till within a short period before I was sent for—that is, ten hours after the birth. The hypogastrium was then occupied with a large tumor, which extended almost to the umbilicus; the pains had nearly ceased; pulse 90. On examination per vaginam, the os uteri and adjacent parts were much contracted, with the placenta entirely within the uterus. With some difficulty, I very carefully and slowly succeeded in introducing the hand, and discovered the placenta to be still adherent. Seizing within the palm of the hand a loose portion of secundines, then, with the closed knuckles placed against the fœtal surface, and counter-pressure with the other hand over the abdomen, uterine contractions were re-excited, and both the placenta and hand speedily expelled. No hemorrhage followed. The perineum was badly lacerated by the labor.

Cases of labor in the standing position possess some interest in legal medicine, as showing the casualties that may thus occur to mother and child. And, indeed, formerly the practicability of labor in this position was at times a mooted question in the courts in cases of infanticide. To us, they are warnings of the

necessity to enjoin certain rules as to the position to be observed in human parturition.

CASE III.—*Delivery in a Standing Position—Hemorrhage.*—Mrs. ——, æt. 34 years, the mother of several children, was taken in labor, with slight pains, about midnight, when I was sent for. Immediately after my arrival, and before I could have had control of the case, she arose from the couch, thinking the labor not far enough advanced to forbid this; but while standing upright on the floor, and supported by some object near at hand, one or two throes soon expelled the fœtus to the floor. My opportune presence, and the resistance afforded by her clothes, perhaps saved the child from serious injury, if not death, by striking with force against a chamber utensil. With great care, I had her borne, together with the infant, to an adjoining couch, and then, as respiration was perfect in the child, effected the division of the cord. Examination revealed a portion of the placenta exterior to the os uteri, and as she had been subject to *post partum* hemorrhage in some previous labors, I deemed it prudent to pass the hand along the funis and effect the delivery of the placenta. This was done very readily, and the uterus contracted well. Indeed, from this time after-pains continued, with slight intervals of repose, while the uterine tumor appeared distinct *in hypogastrio*. A graduated compress and roller were applied to the abdomen, and a dose of laudanum exhibited. In about 45 minutes after delivery, she very suddenly complained of vertigo and impairment of vision; said she saw everything dark. Her countenance now became pale; pulse small, thread-like and flagging; the uterine tumor had as suddenly elongated; she was evidently flooding. Some fluid blood and clots were found externally; but, on re-introducing the hand, it entered a mass of semi-coagulated blood, which was removed, and pressure made with the closed fist, directed to the place where the placenta had been attached, assisted by the other hand over the abdomen. The flooding was thus controlled, and the uterine efforts became vigorous enough to expel the hand. Cold applications were made externally and per vaginam, strict bandaging enjoined, and plumbi acetas and tinct. opii prescribed. The patient soon rallied, and after 7 P. M., progressed as in ordinary labors, without any untoward symptoms.

Case IV.—*Complete Delivery while Supported by the Knees and Elbows.*—A lusty and robust negress, the mother of several children, had succeeded in concealing all evidence of her pregnancy from the family in which she lived till the last month, when suspicion was aroused; and even then she stoutly denied the fact. Labor came on very suddenly, and without preparation. In the morning nothing had appeared amiss. I happened to be present at the time, and saw her one instant moving about the yard with her usual gait, and the next moment, no sooner had she disappeared from my view, than I was hurried to her room. I do not think two minutes had elapsed from the first appreciable warning of labor before I was with her. She chose a position on the bare floor, supported by her knees and elbows, and kept it in spite of all entreaties or efforts to the contrary. In the meantime, the fœtus was speedily expelled, and the next pain or two brought the after-birth away before the funis could be divided. The whole process occupied less than two minutes, during which she was like one stupefied by liquor, and subject to purely automatic movements. I have never seen a more expeditious labor, or one from which recovery was more rapid. Some primiparæ have proved at times uncontrollable, and assumed somewhat of this position in labor for short periods; but this is the only one in which it was preserved through all the stages.

Case V.—*Rupture of the Funis—Irritative Fever—Recovery.*—During the night of the 26th November, I was requested to attend Mrs. ——, aged about 28 years, the mother of two or three children. I was informed that after some uterine hemorrhage, labor had commenced about noon of the 23d instant, and proceeded well up to the birth, but as some delay occurred in the delivery of the placenta, a stupid midwife had pulled with such force at the funis as to rupture it, leaving the placenta within the uterus, and that it had not since been expelled, although the after-pains were frequent and teasing. The vagina and os tincæ were found hot, sensitive to the touch, and very much contracted. The hand could scarcely be introduced within the vagina, and the os internum admitted only of the point of the fore-finger, which barely came in contact with the placental mass. But even this examination could not be endured, as a te-

tanic rigidity of the parts was induced with general rigors. The lochia was grumous, tinged with blood, and becoming very offensive. The uterine tumor was quite large, and reached to half the distance between the pubis and umbilicus. Pulse small, irregular—about 95; bowels regular; milk began to be secreted. At times, however, delirium was present. Finding manual or instrumental relief impossible, and, if attempted, worse than useless, and no benefit to proceed from ergot or other means, I resorted to a supporting treatment, with the occasional employment of anodynes, and mild, laxative enemata. Meantime, as the fetor of the discharges had rapidly become insupportable, being larger in quantity and accompanied with shreds, I ordered to be administered injections per vaginam of a weak solution ($\frac{1}{6}$) of pyroligneous acid, frequently repeated and in full stream.

On the 30*th Nov.*, the irritative fever had increased in severity, accompanied with diarrhœa and herpetic eruptions. The delirium also intensified. Many shreds of membranes were removed from the vagina, and continued to issue from the os. Continued the treatment, with the addition of stimulants. The pyroligneous acid was apparently of the greatest benefit as used.

Dec. 1.—Her improvement was great; the diarrhœa had entirely ceased; but little fever remained, and no delirium. The uterine discharges were little offensive, the shreds fewer, and the uterine ball had sunk low in the hypogastrium.

Dec. 2.—Pulse regular; skin pleasant; bowels moved twice; milk freely secreted; vaginal discharges now inoffensive, very trifling in quantity, and attended with very few small shreds. Examination per vaginam showed the os nearly normal.

Dec. 3.—Discharges colorless. From this time she progressed to complete recovery.

Case VI.—*Rupture of the Funis—Placenta Expelled under the use of Ergot.*—Charlotte, negress, mother of nine children, since lifting a heavy weight some days previous, ceased to feel any motion of the fœtus, then in the seventh month of utero-gestation. To-day she was taken in labor, ushered by unavoidable hemorrhage in considerable quantity, and, about 5 P. M., miscarried. After this, the flooding continued, and she suffered from nausea, vomiting and coldness of surface. I was sent for about midnight. She was then almost pulseless, but by means

of opiates at short intervals, pressure and cold applications, incipient reaction and uterine contractions were brought about. I then tried to pass the fingers along the cord into the vagina. In doing this, and without any traction being used, the funis came away, separated from its placental connections. This could only be explained on the ground that it had sustained some injury in the miscarriage. Finding it injudicious, from the contraction of the womb and the cessation of hemorrhage, to pursue further exploration at this time for fear of a constitutional shock, I continued the treatment, with the additional use of ergot, and after the exhibition of two or three doses, the placenta was expelled. No untoward symptoms followed, and the woman did well.

Case VII.—*Placenta Retained Upwards of Nineteen Hours.* M——, æt. 18 years, a primipara, after a natural labor of nearly ten hours in duration, had given birth to a female infant. Nineteen hours after this, I was requested to relieve her of a retained placenta. She complained of soreness over the abdomen, increased on pressure, and accompanied at times with slight pains of an expulsive nature; pulse small and rather frequent. On examination, a small portion of the placenta was found lying in the superior portion of the vagina, and embraced by the os uteri, through which entered the cord. Introduced two fingers to its insertion, and the placenta was gently *unbuttoned* and brought down the successive planes of the pelvis, along with some clotted blood. It was found to have been greatly detached, if not entirely so, and the cord shrunken, but detained by the narrowing of the neck of the uterus, and a want of action in the right direction to overcome this obstruction.

Case VIII.—*Clandestine Delivery—Placenta Prævia.*—Mary, a negress, aged 15 or 16 years, was taken in labor on Saturday morning, as she now acknowledges, but being confined to her bed and room for a necrosis in the lower third of the femur, was favorably situated to conceal her pregnancy. The placenta first came away on the same day, and was separated and secreted by a female accomplice; considerable hemorrhage is said to have occurred. On Monday following, she was delivered of a still-born child, represented to be at full term, but without secundines; this was also effectually made to disappear. Suspicion, however, having arisen, I was sent for. The parties

implicated made confessions tallying with the above. The girl, on examination, exhibited all the signs of recent delivery, such as the presence of bloody lochia, turgescence of the lactiferous glands, and the changes recently undergone by the organs, &c. The uterus and vagina were contracted to the usual extent observed on the second day after labor. She had little fever, but was much debilitated, and suffering pain mostly from the necrocis. Prescribed tonics and anodynes. After recovery from labor, she was treated for the necrosis.

Case IX.—*Premature Birth—Maceration of the Child—Anomalous Presentation.*—Mrs. ——, aged 24, primipara, in the eighth month of utero-gestation, began on the evening of the 16th December, to experience slight occasional pains in the back, to which she ascribed little importance till the next evening (17th) when, on going to bed, they increased in force and frequency. On reaching the house, at 11 o'clock P. M., I found the abdomen quite flaccid and relaxed, presenting no regular uterine tumor in the usual situation; but a more minute examination revealed an oblong, renitent mass lying either against the right or left ilium, according to the position she assumed in bed. On the occasion of a severe pain, this gathered into a hard ball in the hypogastrium, though of a much smaller size than was to be expected at her present term of pregnancy. The os externum and vagina were relaxed and lubricated with mucus; the os uteri dilated to about an inch in diameter, was high up, and faced the sacrum; it presented a membranous protrusion, which included a small, harder substance. This examination proved unsatisfactory; but under subsequent parturient efforts, was brought down a body corresponding in size to a child's head, which now extended from the right acetabulum to the left sacro-iliac junction. This gave evidence in part of the osseous structure of the skull, while in other parts it was doughy and nodulated. When the os, that had been rather rigid, now opened sufficiently, the fœtus, or its remains, were found amassed in an almost inexplicable manner, as both the head and feet presented at once. The waters, rather offensive, having broke, the left foot was found rather in advance; it was quite small and malformed; the leg to which it was attached was devoid of bony support, and felt like a membranous cord. This was brought down and the other foot se-

cured in turn, so as to deliver the trunk. The head was somewhat delayed in passing the os, owing to this part again contracting around the neck of the fœtus. This difficulty being overcome, a half macerated fœtus was delivered. Its bony skelton was very imperfect. The bones of the skull were not in proper apposition, but fallen in, as it were. The trunk seemed devoid of a spinal column, and the ribs and scapulæ presented ossified points only at their centres. The extremities were without osseous support. The placenta came away very readily, having evidently been detached for some time, and was much decomposed, macerated and shredy. There occurred no hemorrhage, but much after-pains, till some portions of secundines were expelled, which took place about the next night, and was followed by some lochial discharge. Full recovery ensued under ordinary treatment.

Case X.—*Shoulder Presentation, Maceration of the Child—Death from Exhaustion and Septicœmia.*—Mrs. ——, æt. 18 years, in her second pregnancy, began to experience slight pains in the evening of the 20th January, for which a midwife was summoned; but it was not till the night following that the waters broke and the funis presented. The suffering of the patient becoming great, the services of a physician were procured. The Doctor found, in addition to the cord, the left arm and shoulder presenting. The throes were violent. The whole of the 22d passed away, with no attempt to relieve her—the case being left pretty much to nature. Early in the morning of the 23d I was requested to attend in consultation at the house, nearly 15 miles from my residence. On my arrival, the poor woman presented a most pitiable object; her features were blanched and pinched; surface cold; wrist almost pulseless; respiration slow and laborious; some petechial spots appeared on the limbs and trunk; she manifested a disposition to somnolency, yet her attention could still be aroused and fixed; she had had, at times, nausea and vomiting. Morphia and acetate of lead had been prescribed, under the impression that flooding to a great extent had supervened. The pains came on now at long intervals, and were feeble. On inspection, I found the left arm and shoulder of a dead fœtus lying out of the vulva. These showed a general desquamation of the cuticle, except of the palm, which turned towards

the mother's back. External to the vagina was a quantity of jelly-like, liver-colored, decomposed fluid, of a disagreeable odor, and no coagula whatever. Passing the hand into the vagina, I met some of the same mucus. The os uteri was entirely patent. Having given some cordial to bring on re-action, I awaited a few minutes for an improvement of the pulse, when I passed the hand without difficulty and brought down a foot—deeming this entirely sufficient, under the circumstances, to effect version in the long axis of the fœtal body. The entire fœtus was thus easily brought out, assisted by contractions excited in the uterus by gentle external manipulations. The birth was followed by a gush of offensive putrid waters. The placenta, detached and macerated, was soon expelled under uterine efforts. There was absolutely no hemorrhage. Under appropriate management, the womb contracted well; a gentle re-action had been secured, and she seemed much revived. She was then left under very strict directions, but died in the evening. The infant was nearly full-termed.

In cross births, version should be the rule. The exceptions are few when other means are required. I have met only a single case where delivery could not be effected by rectification. Possibly this is to be accounted for by the fact that great deformity of the pelvis is very rare in this section. I have failed to acknowledge the propriety of *all* the instances of decapitation and exvisceration that have, from time to time, been reported to me. It is precisely in cases of cross birth that I regard chloroform to be of the greatest possible value for favoring the rectification of the locked fœtus during anæsthesia, by which rupture of the uterus might be avoided.

Case XI.—*Arm and Shoulder Presentation—Exhaustion of Protracted Labor—Speedy Delivery by Division of the Spinal Column of the Dead Fœtus.*—Mrs. ——, a well-formed woman, about 30 years of age, the mother of several children, was taken in labor about noon of the 12th April. In the evening, she gave birth to a female child of ordinary size, when she lost much blood. The uterine efforts continued with little abatement till 11 o'clock A. M. of the 13th, when the midwife discovered an arm presenting externally. It was not till three hours afterwards that I was requested to attend. I was met by the

messenger about two or three miles from the house, and at a much greater distance from my own home. Without delay, I was soon with the patient, though, in a measure, unprepared for such an emergency. The left arm and shoulder of the fœtus, of a deep, livid hue, were out of the os externum; the labia on the fullest stretch, and a large portion of the side and back of the infant was found doubled up and firmly wedged within the inferior strait, while the head was still above the brim of the pelvis and pressed against the right ilium and os pubis by short, sharp and persistent uterine efforts. Attempts, after due preparation, to pass the hand within the uterus proved futile. Her countenance was fallen and anxious; pulse exceedingly weak; respiration oppressed; retching and vomiting frequent. Two doses of laudanum were exhibited with little effect; the fœtal mass continued too firmly impacted to be moved in the least, or to admit the fingers beyond narrow limits. Externally the uterine tumor presented its long diameter from side to side. The fœtus had ceased to live for some time, for, besides the general ecchymosis, a loop of the umbilical cord was pulseless and flabby, and there were signs of the passage of the meconium. The death of the infant being certain, I determined upon its delivery by dividing the arch presented by the vertebral column, as this offered the greatest and almost the only resistance to podalic version. Acting upon this resolution, and not for the purpose of exviscera-tion, I introduced the strong, slightly-curved blade of a pocket-knife with care, and properly protected by the right hand, into the vagina, to a point below the right scapula of the fœtus, thence passing it within the thorax, and cutting obliquely through the adjoining ribs and vertebræ, as far as possible towards my left hand which had been inserted on the opposite side to protect the maternal parts from injury. So soon as this section was completed, the lower fragment of the vertebral column, as anticipated, was projected obliquely forwards, overriding the superior by two and a half inches at least, and this brought the right groin just within reach of my finger. Seizing this with the hooked finger, while with the left hand I elevated the upper arm of the infant so as to favor version. The breach came easily down the plane of the lower strait and a few pains served to accomplish the delivery under the usual assistance. The remain-

ing attachments of the trunk were of much service in bringing down the head. The infant was of the average size and weight of males. The placentæ were expelled in less than five minutes, and appeared to have been detached for sometime. No hemorrhage ensued, if there be excepted a small quantity of coagula. Afterwards she progressed favorably to recovery under a treatment which was mostly antiphlogistic.

The operation in this case, though apparently extemporized and brought about under a sudden emergency, was nevertheless based upon a consideration of the true relations of the parts and their studied admeasurements as concerned in the mechanism of labor. Thus adopting the mean length of the fœtal skeleton at 9 months, according to Beclard, of 18 inches, an approximative table might be constructed as follows:

Cervico-bregmatic diameter.....	3.50	inches.
Length of cervical vertebræ	1.50	"
" dorsal "	3.75	"
" lumbar "	1.75	"
" false "	1.50	"
" inferior extremities.....	6.00	"
	18.00	inches.

In this instance the resisting force was centred in the arch formed by the spinal column, assisted, while it remained intact, by the contained viscera of the trunk. Exvisceration alone would not have sufficed to save the mother; indeed, it might have been reasonably feared that this slow and revolting process, lasting, as it is apt to do, for more than two hours, would have ended in her dissolution. The section above described was effected about the seventh dorsal vertebra, so that if the entire length of the true and false vertebræ be estimated at $8\frac{1}{2}$ inches, it would appear that the column was severed at a point $3\frac{3}{4}$ inches below the occiput, leaving a length to the lower portion of $4\frac{3}{4}$ inches. In performing the operation under the circumstances related, there was a considerable risk of wounding the left hand of the operator, but this was fortunately avoided by a precise and steady use of the knife. A small strip of flexible metal bandaged to the hand, to receive the edge of the knife, might have been of service. I am not prepared to say whether this operation would have been as successful in a reversed position

of shoulder presentation—that is, when the fœtal palm is turned forward—though I see no valid objection to its applicability, provided always that the division is well effected and the parts properly controlled in the subsequent steps. For the rest, the operation was performed almost without the knowledge of the mother, and delivery effected in a few minutes.

Case XII.—*Puerperal Eclampsia—Venesection—Gelseminum.*—Mrs. ——, aged about 31 years, the mother of several children, in the morning of the —th January, began to complain of headache and confusion of mind, and soon afterwards of dimness of sight. She was noticed to act with vagueness. Although in her 9th month, her confinement was not as yet expected. In the afternoon, while seated at the fire-place, she suddenly fell backwards in strong convulsions, and was thought dying. My attendance was immediately requested. I found her undergoing violent convulsions, with brief intercurrent intervals of relaxation, during which she breathed stertorously. Pulse strong and bounding; adnata deeply injected; features, especially the lips, swollen. Indeed, there was every symptom of great cerebral determination and impending danger. Placing the hand upon the abdomen, I found contractions of the uterus to syncronize with the accession and continuance of each paroxysm. I pronounced her in labor, to the surprise of her friends. On examination, the vagina showed no signs, but the os uteri had begun to dilate, and was now enlarged to the size of a dime, though its margin was rigid, and apparently unyielding. I immediately bled her, *pleno rivo*, in all about 48 ounces, till the pulse flagged and was brought down, and the cephalic determination much reduced. The convulsions continued, though in diminished intensity, and at greater intervals. About midnight, the os had opened to nearly twice the size last named, but I feared, from the rigidity and dryness of the parts, that labor would be protracted, to the certain injury of the infant. I then resolved to administer the gelseminum (Tilden's fluid extract), as employed by my friend, Dr. Robert S. Payne, of Lynchburg, in sphyncteric rigidity of the os internum and vulva. This remedy was also indicated on account of its known sedative properties by which it reduces the frequency of the pulse, and calms the irritability of the nervous system. Fifteen drops were given and

repeated in half an hour. Soon after the second dose, a most remarkable relaxation, dilatation and moisture of the os, vagina and vulva took place almost simultaneously with the rapid advance of the fœtal head from the upper to the lower strait—so rapid, indeed, that I was only just in time to support the perineum and receive a viable infant. The placenta came away in half an hour. After this, there occurred two or three slighter convulsive paroxysms, corresponding with the incursion of after pains. Ergot was then administered, as also minute doses of tartrate of antimony, and external applications to the hypogastrium. After a quiet sleep, she recovered her intelligence, and in due time regained perfect health. In a few days after delivery, the infant was attacked with convulsions, but ultimately recovered.

While my own experience amply confirms the statement of Hamilton and Gooch as to the imperative necessity of venesection for the safety of the mother in puerperal eclampsia, I am far from regarding it in any other light than as the best means of saving the brain from dangerous congestions consequent upon convulsions; and secondarily, as relaxing the system generally, and rendering parturition easier. This, with enemata to free the large intestines, should never be neglected. These means and a speedy delivery constitute the safety of the mother; for I cannot think any other agent can ever here supersede venesection. So much, then, for the woman. On the other hand, the ratio of still-born children has been the greater owing to the want of means to expedite delivery and rescue the child from impending danger. In this connection, therefore, I am happy to point to the great boon conferred by Dr. Payne to the profession and to humanity by the publication of his paper on "Gelseminum in Labor," in the Nov., 1874, number of the *Va. Medical Monthly*.

ART. II.—*A Report on Progress and Science of Medicine.* By D. R. WALLACE, M. M., M. D., Superintendent State Lunatic Asylum, Austin, Texas. (Read before the State Medical Association of Texas, April 6th, 1875.)

"Merchants occasionally go through a wholesome, though troublesome and not always satisfactory procedure which they call 'taking stock.' After all the excitement of speculation, and pleasure of gain and pain of loss, the trader makes up his mind to face facts, and to learn the exact quantity and

quality of his solid and reliable possessions. The man of science does well sometimes to imitate this procedure."—*Huxley.*

Our annual meetings are regarded as occasions suited to such an undertaking—suited to an inquiry into the nature and value of the present results of medical investigation. Unwisely, as he must think, and fear you will conclude, the writer, at the last meeting, was made chairman of the *Committee on the Science and Progress of Medicine.* There is room for some difference of opinion as to what the occasion calls for. But one report of this sort is remembered as having been made to this body. That paper, prepared by a learned member from Galveston, read at the second session, was a succinct history of the healing art, from its first rude beginning down to within living memory and passing events; a mode of treating the subject objectionable, for the reason that such outlines are to be found in every department of medical literature—the recognized common property of the profession. Besides, the general nature of the statements such a course makes possible, must render them of little worth. An examination of the history of other State Associations reflects little light or guidance. Most of them, like the one referred to, satisfy the requirements of the occasion by hasty rehersals of brief historical incidents; others, despairing of accomplishing anything on a subject so general, strike out for themselves and prosecute some favorite line of research, resulting in a monograph, not a report, on medicine; while others aspire to little more than to occupy the usual time and space with common-place and general statements in regard to the importance, relatively, to other departments of human activity, of the medical profession, and the worth and dignity of those who undergo its labors and share its honors.

The writer, under general orders from this honorable body, though left in the performance to his own habits of study and modes of thought, would advance to the front, and, mounting the watch-tower of medical science, and sweeping the horizon of the profession, report what, in his estimate, is to be seen of most interest; "in what direction the multitudinous divisions of the noble army of the improvers of medical knowledge are marching; what important stronghold of the great enemy of us all, ignorance, has been recently captured; and also, with due

impartiality, to mark where the advanced posts of medical opinion have been driven in, or a long-continued siege has made no progress."

It has been thought worth the while to attempt to arrive at some definite idea of the nature of the task imposed as indispensably preliminary to its execution; and now that one stands face to face with the conception and surveys its magnitude, he is only sustained in his attempt by the reflection that well-meant efforts, however feebly executed, seldom fail of due appreciation; as also by the assurance that his work, done with anything approximating fidelity, cannot fail to inspire fresh confidence in the breasts of his fellow workers in their efforts to extend the domination of science over regions "won from the void and formless infinite," into which she has as yet hardly penetrated.

Making due allowance for the ordinary sources of error in judging of the present as compared with the past, this must be admitted a most progressive age. Scene on scene and act on act follow each other in such rapid succession that one is brought to and stands before the *denouement*, bewildered with astonishment, unable, amid the rush and whirl of quickly recurring developments, to bring his conceptions into harmony with the relations of the several steps conducting to the final results. It has been said "there is a soul of goodness in things evil, and a soul of truth in things erroneous." That, amid the activity characterizing the past year there should have been much of the erroneous, should excite quite as little surprise as that, in the meantime, the soul of truth should have been marching on.

The healing art is one of the most obscure departments of investigation with which man has had to deal in his attempts to subordinate material agents to his will, and to make them subservient to the purposes of life. With all our boasted knowledge and progress, we are ignorant of the changes—those inward, occult, disturbing influences—which take place in any disease. Life itself is a grand mystery. Each one present carries within himself a principle which not all the sciences of the earth enable him to resolve into any more elementary conception, or to reduce to a more extended generalization. So long as the subject of Biology is thus involved in obscurity, the problems of disease must remain unsolved, and the practice of medicine

must be as it has been in the past—largely empirical. While chemistry can detect no difference between oil of turpentine, for example, and some twenty other hydro-carbons, which, though isomeric to the severest analytic scrutiny, are yet totally distinct in their actions upon the human economy—no difference between many of the polymeric bodies, some of which, as protene, are said to exist under no less than a thousand different forms, and which discharge the most diverse offices in histogenisis, structural anatomy and physiology; none between structures having the most opposite functions; while histology discovers no difference between the processes of proliferation for the building up, and of retrograde metamorphosis for the disintegration of the organism; and while therapy daily calls for the assistance of agents whose *modus operandi* is conjectural—while these are facts, medical theory must remain unsettled, and practice correspondingly uncertain.

Without attempting, therefore, to trace the science of medicine through the cloistered dust of the ages, to call up its fantastic theories and modes of treatment founded upon metaphysical subtleties and whimsical conceits—mere literary inanities—your attention is directed to a few of the most salient points of recent practice and teaching, so far as these have assumed definite proportions, or become embodied in morphological outline, so as to be made practically available for the amelioration of human life and the promotion of the social weal by relieving pain and suffering, restoring the sick to health, and by preventing the genesis, and interposing barriers to the spread of disease.

In addition to the reason assigned above, as having its origin in ignorance of the laws of life, and an imperfect knowledge of the physical sciences for the introduction of false theories into medical practice, that strut their brief hour upon the stage, there is a moral one—common enough in these times of rapid change and restless activity—which, if less to be deplored, is certainly little less mischievous—a disposition no where more strongly pronounced or actively displayed than in the medical profession, viz: *to discard what is old because old, and to run after what is new because new.* Nowhere is the old couplet

> "Be not the first by whom the new is tried,
> Nor yet the last to lay the old aside"

of more suggestive value. Every one familiar with current medical literature must have observed with what facility the most inconsistent theories of disease are accepted, and contradictory modes of treatment adopted, for no other reason than that they strike by novelty, except it be the audacity of the language with which they are commended to professional confidence.

About forty years ago, practitioners began to notice that their patients did not improve under their usual treatment; that there was more prostration and fewer recoveries, and in recoveries the disease was more protracted and convalescence more retarded. The fact, at first so little conspicuous as hardly to attract attention, soon became so manifest, indeed, that the profession settled down in the conviction (of which in its rise, progress and culmination they had had occular demonstration) that one of those secular changes had taken place in the human economy, of which there have been many in both animal and vegetable life; as a consequence of lowered vitality, diseases were more asthenic, and, therefore, less tolerant of a spoliative treatment than formerly; that, contrary-wise, stimulants and nutrients came in earlier, and were more generally useful. Professional teaching and practice remained settled in this interpretation of the phenomena for a period of years. In due time, the correctness of the conclusion was called in question. It was announced that no such change had taken place; the idea was preposterous; "that since the fathers have fallen asleep all things remain as they were;" that, in fact, the change has occurred in ourselves within the last few years, during which we have become immeasurably superior and greatly wiser than our fathers—an explanation sufficiently flattering to the present generation to insure its limited acceptance.

J. Russell Reynold (Introduction to *System of Medicine*) says:

"Partly to account for and partly to justify so material a change in our mode of dealing with disease, it has been assumed that the *vis vitæ* of the British constitution has been lessened, or that so-called type of maladies has altered—an assumption that has little to be said in its defence, and still less that can be regarded as its establishment. A more simple, and, as we believe, more accurate explanation of the change is to be found in this: that previously theory was the ground-work of therapeutics; that now fact is the basis of treatment; that years ago diseases were treated by their names, and that now they are treated by their known conditions; that local changes were the guides in time gone by, but that the general state of the patient is that which in these days the physician esteems his therapeutical informant. When pathology scarcely existed, medical practice was an em-

pirical art; with the growth of pathology, therapeutics, still an art, has become or is becoming a science."

The antithetical clap-trap contained in these magisterial assertions of the distinguished Fellow of the Royal Society is characterized in their every line either by a misstatement or a torturing of fact and baseless deduction—a severe impeachment, to be sure, but one which, were this the time and place, could be established to no small extent from the writer's own works, and in his own words.

Dr. Markham, in his *Gulstonian Lecture*, dropping all disguise, comes out squarely, and will have it that the fathers of modern medicine went on year after year piling up hecatombs of victims as offerings to their ignorance—slaughtered outright by treatment; that these men, though many of them were persons of the highest order of intellect, and distinguished for their literary and scientific culture, could not see the deleterious effects of the remedial measures had recourse to; the difference between those submitted to their treatment and those who happily escaped it. As if this were not a sufficient draft upon credulity, it is insisted that the thousands of the more aged members of the profession who were practising before the change, and were devoutly certain that they obtained just as satisfactory results by bloodletting, tartar emetic, calomel and jalap, as they do now with their stimulants, opiates and nutrients, and who recalled distinctly when their patients began to bear badly a lowering treatment—watched from year to year the gradual revolution, and noted carefully the symptoms and facts that characterized each successive phase of it; that these men, many of them profoundly learned, were grossly deceived; that they did not experience what they thought they did; did not feel what they thought they felt; did not see what they thought they saw. Than this there would seem to be no more startling episode in the history of medicine.

Fashion has its hour. The excitement stirred by novelty having subsided, men begin to inquire into facts—sit themselves calmly down to *think*, ever a dangerous period for mere theory. Is it probable, they begin to inquire, that the Sydenhams, Haygarths and Fothergills; the Heberdins, Fordyces and Gregories; the Allisons, Cheynes and Graves; the Coopers,

Cullens and Rushs did not know what they were about? that while distinguished in other walks of life, in that to which they devoted themselves especially, to which they gave the best years of their lives and the profoundest investigations of their intellect, they were so completely misled that they did not know, when they gave a dose of medicine, whether it did good or harm? Would such a conclusion be either in accordance with common sense or in consonance with the modesty of science?

A brief reference to our own distinguished countryman, Dr. Rush, will be pardoned. It is stated that in the malignant epidemic of yellow fever that prevailed in Philadelphia from July until November, 1793, while other physicians were entirely unsuccessful, "he treated and subdued the disease by purging and bleeding, following up his practice with great boldness, perseverance and success. It was estimated that not less than 6,000 of the inhabitants were saved by his treatment." He was honored for his skill by testimonials of admiration from the King of Prussia and Spain, Queen of Etruria, and Emperor of Russia. Yet, this man, thus successful, thus honored, one of the most voluminous writers of the age, of whom Dr. Priestly said "I never knew a greater man," and Jefferson, that "he had met his equal but seldom in life"—this man was entirely misled; his blood-letting, calomel and jalap were hurrying victims to the grave by the thousand. It is quite certain this treatment of the same disease, in the same city, would do so now.

Strange enough, not a few of the younger members of the profession, misled by authority, had been induced to discard the evidence of thousands of the more aged of the profession who would swear to having witnessed the change. Now, certainly, it was thought, there must be *somewhat* exceedingly improbable in *the thing itself*, otherwise it were, to the last degree, unreasonable, since this is a matter of fact, and for the direct exercise of the senses, thus to deal with such an accumulation of testimony.

It may startle those who have not kept pace with the recent investigations in biology bearing on this subject, to hear that the conclusion has been reached, approximating, withal, as nearly to demonstration as it is possible to reach upon such a subject, *that so far from there being any abstract or antecedent improbability in the idea of a change of type in disease, it is not only probable*

in itself, but its negation would stand as an exception in the universe, so far, at least, as investigation has been able to track it up.

"When first we heard," says Herbert Spencer, "this assertion, we were inclined to disregard it, as one of the many manifestations of the old tendency to exalt the past at the expense of the present. Detailed observation, however, has greatly shaken our opinion. Men of past generations, living riotously, as they did, could bear much more than men of the present generation, who live soberly, can bear. Though they drank hard, and kept irregular hours, were regardless of fresh air, and thought little of cleanliness, our recent ancestors were capable of prolonged application without injury, even to a ripe old age. Witness the annals of the bench and bar. Yet, we who think much of our bodily welfare, who eat with moderation, and do not drink to excess, who attend to ventilation, and use frequent ablutions, who make annual excursions, and have the benefit of greater medical knowledge—we are constantly breaking down at our work."

Such is a statement of the fact. Now as explaining it, and the phenomena observed in what is known *as change of type in disease*, it may be stated as a corallary of the conservation, or, as some prefer to name it, persistence of force—a doctrine universally admitted by the advanced thinkers of the age—that all force is rhythmic, and this forms the movements of worlds and systems of worlds down to the most inconspicuous actions that take place in a molicule.

"Perhaps nowhere" (Herbert Spencer, *First Principles of Philosophy*) are the illustrations of rhythm so numerous and manifest as among the phenomena of life. In animals, we have a great variety of movements, in which the alternations of opposite extremes go on with all degrees of rapidity. Primary rhythms of organic actions are compounded with secondary ones of longer duration. These various modes of activity have their recurring periods of increase and decrease. Experiments have shown that there are still slower rises and falls of functional activity."

Nothing can be more certain than that this obtains in every department, and controls in all the phenomena of animal life.

From the standpoint of these statements, establishing the antecedent probability, aye, necessity, of the phase of disease known as change of type—an unfortunate expression—one is prepared to attend to the testimony of a few (their number could be increased to hundreds) distinguished eye-witnesses:

"In place of loss of blood," (Stokes' *Lectures on Fever*) "we have the exhibition of stimulants; in place of a system of starvation, we have the careful use of stimulants. This change in practice, depending upon a change in the vital character of disease, was followed by the charge against many of our predecessors and teachers that they were mistaken practitioners, ignorant of pathology, **** and it has been suggested that the whole doctrine of change of type was an invention to cloak former errors. **** Broussais arraigned the existing and former practitioner for *not* treating fevers and acute diseases by local bleeding and starvation."

After referring to a number of eminent authorities, Professor Stokes continues:

"Now, all these testify that the character of disease has changed from the sthenic to the asthenic type. **** If we hold with Prof. Bennett and Dr. Markham, that the doctrine of the change of type is untenable, we must believe one of two things—either that these distinguished men were deceived, or were themselves deceivers."

"It is probable," (writes Dr. Allison) "that the liability to diseased action in all the departments of the animal economy itself is subject to variations, which are made known to us only by the variations in the phenomena themselves."

"Looking at the fever epidemics of Edinburgh," Sir Robt. Christian says that observation "from the beginning of the present century shows conclusively that in 1817–20 and 1826-9, their character was that of Cullen's synocha and synochus." He dwells "on the hard, incompressible pulse, the ardent heat of the skin, the florid hue of the venous blood, and the impetus by which it escaped—almost *per saltum*—from the vein, and the vivid glow of the surface, and the distracting pain and pulsation of the heart and chest; bleeding was largely practised, and with the happiest results. But in 1834, I found that probably for two years previously a change had been going on. In point of fact, I am able to state most positively that the abandonment of bleeding in fevers was suggested by an observation of a change in the constitution of fever, and in the effect of the remedy on it.

"I have given a sounder explanation, less flattering to the rising generations of physicians, but surely more honorable to physic itself, more creditable to medical observation and experience, and more in consonance with the advanced state of medical philosophy. My own conviction on the subject is so strong that I regard nothing more probable than that, in the course of time, some now present will see the day when a reflex in the constitution of fever will present it again in its sthenic dress."

"That the type" (says Prof. Stokes) "of both local and essential disease varies within certain limits of time, we must believe. That a most asthenic form of disease has for nearly half a century prevailed in these countries, I hold to be an incontrovertible truth.

"In judging of this question, the evidence of those who have been intimate with acute diseases in this country during the period from 1820 to 1835, must be attended to. As already stated, I have received a vast number of communications from experienced and practical men, who have no theory to support, all telling the same tale, all testifying to the same fact—that a change in the vital character of acute disease was observed.

"That morbid anatomy adds its testimony to the truth of the doctrine of a change of type in disease will, I believe, appear from considerations based on observed facts. Thus, on or about the time when an asthenic tendency was first observed in Ireland, a change was observed in the condition of the blood drawn in venesection. The buffed and cupped character became very rare; and I well remember expressing my surprise at the absence of the fibrinous coat in cases in which we had fully expected its presence. In place of the small, dense, almost spherical crassamentum, we had a soft clot, with little if any separation of serum; while, instead of the buffy coat with inverted edges, we had a thin, sizy pellicle. As a general rule, the specimens of disease were indicative of a less degree of pathological energy. In pneumonia, for example, the redness, firmness and compactness and defined boundary of solidified lung was seldom seen; and that state of dryness and vivid scarlet injection to which I ventured to give the name of the first stage of pneumonia, became very rare. In place of these sthenic characters, we had a condition more approaching splenization; the affected parts purple, not bright red; friable, not firm; moist, not dry; and the whole looking more like the result of a diffused than of an energetic and concentrated inflammation.

"Let us now return to the serous membranes, and the same story is re-

peated. The high arterial injection, dryness of surface, the free production, close adhesion and firm structure of the false membranes in acute affections of the arachnoid, pericardium, pleura and peritoneum, which had been so familiar, ceased in a great measure to make their appearance. Ths exudation began to assume a more or less hæmorrhagic phase—serous or serofibrinous effusions, tinged with coloring matter, replacing the old results of sthenic inflammation. The effused lymph lay like a pasty covering rather than like a close and firm investment, as before; it was thin, ill defined and transparent in varying degree. All this tallied exactly with the change in the vital character of the disease."

This great principle (for such it must be admitted) is most incontrovertibly established (1) by antecedent probability; (2) by the unimpeachable testimony of eye-witnesses; (3) by the facts of therapeutics; (4) by the unequivocal *post mortem* disclosures —not a single fact known to the writer tending in any degree to countervail their cumulative force. No argument of a counter character has been attempted—Prof. Bennett and Dr. Markham, men of cool heads and logical minds, not having brought forward any; but satisfying themselves with mere assertions, it was taken for granted, perhaps too hastily, that none exists.

One extreme begets another, so that it has become aphoristic that extremes meet. The intensely inflammatory type of disease that prevailed during the first, second and third decades of the present century, was productive of general polypharmacy. A refluent wave swept medical opinion off in an opposite direction; nor did the re-action cease until the teachings of a certain school had resulted in a practice that may truly be characterized as a "meditation on death." If it is true that "the greater the doctor, the less the medicine," then it ought to follow, the *physician perfect—physic, nil.* From the time the healing art assumed the rudest outlines of a science, it has been held that morbid processes may be relieved, mitigated, ameliorated or modified by remedial measures, and this whether a mere crapulous colic, requiring nothing more for its removal than a simple carminative; or Asiatic cholera, destroying life if not arrested in a few hours; a simple quotidian, needing to prevent a recurrence, but a dose of spider's web, dog-wood or willow bark, or a ligature around the thigh; or a malignant congestion, "curdling the blood, benumbing innervation, and rushing in upon the citadel of life."

Of late, the profession is told that the normal evolution of disease must on no account be interfered with. That the views

of this *laissez faire* school be not misrepresented, the language of one of the most orthodox is reproduced:

"By it," Professor Curwen, of the chair of Anatomy, King's College, London, says: "we have learned the course, duration and termination or natural history of the more acute diseases, and the harm that is frequently done by interference with their normal evolution. Cutting short a fever is hardly heard of, even by the public. Of course, interference with pneumonia, erysipelas, diphtheria, much less typhoid or typhus, is not to be thought of."

A still greater than Prof. Curwen affirms:

"We know no cure for fever: no man ever cured it. It is, however, curable spontaneously. If you leave it to its own course, it is capable of curing itself."

"The doctrine," a distinguished Edinburgh authority states, "of the definite course and duration of *delirium tremens* ought to make us slow to entertain any extravagant expectation of materially abbreviating its duration by remedial measures."

Now, it is presumed, such utterances have some meaning; yet it is quite certain a large portion of the profession fail to understand it. *Delirium tremens* must go on into *natural* resolution in sleep, which it will do in about seventy hours!—*to be sure it will, provided it does not do something else in the meantime.* Let a pneumonia pursue the even tenor of its way into resolution! It will become *riled* and kill the patient if you interfere with its normal evolution! Let enteric fever do its work upon Peyer's glands, &c—you must not interfere with nature. Now, *joco remato*, are not such utterances as those, *supra citat.*, calculated to mislead? Are they true in any *intelligible sense?* Do all typical cases of pneumonia, for example, have the same duration? Is there a fixed order of sequence in any such sense as that, *one thing* happening, another certain something must happen in regular, orderly succession to the end of the disease? That there exists any such order of sequence, or that the order is the same in any two cases, much less in all, the facts disprove. It is not strictly true even in such diseases as small-pox and scarlatina, which approximate most nearly to the typical idea of a disease of definite course and duration. Take the definition of disease given by Dr. J. Russell Reynolds, a *laissez faire* gentleman: "Any condition of the organism which limits life in its enjoyment, powers or duration;" and it is pertinent to ask, What phase or manifestation of *any disease* is there in which the resources of the healing art may not be invoked either to increase the enjoyment, support the powers or prolong the duration of

life? As "there is a soul of truth in things erroneous," so here there is not wanting this element; and if such teaching serves to deter the profession from reckless drugging, and point to the more excellent way of supporting the powers of life, it will subserve a most valuable end. It is believed to be more a dispute about words than of facts, since "Men slide easily from the most momentous controversies into the most contemptible logomachies."

But one cannot help the conclusion that will up in despite of him, that such views have their origin in theory, more especially when it is observed with what industrious assiduity the attempt is made to force them upon professional acceptance, even to the extent, be it confessed with regret, of *perverting history, manufacturing statistics, and misinterpreting the actions of remedial agents.* In illustration, witness a packed jury after having misinterpreted, if not misrepresented facts, gravely announcing to the profession that mercury, *facile princeps* of cholagogues, employed as such by all nations, even by the Chinese, among whom the discovery of its virtues seems to have been independent, does not act upon the biliary secretions at all! The common sense and experience of the profession are shocked. While theorizers are vainly trying to inflate their soap-bubbles, the Helmholtzs, and Partens, the Tyndals and Huxleys, Spencers and Bains, Agassizs and Drapers have been digging away at the physical sciences, torturing from Nature her secrets, both in its molar and molecular aspects. Virchow has gone on questioning his cells, and Brown-Sequard and Hammond pressing their inquiries into the dark recesses of the nervous system. A point has been reached in physical exploration exceedingly damaging to mere theorizers. Brunonianism convulsed professional opinion in Europe for fifty years; such vagaries run their course now in as many months. It cannot be otherwise than a matter of gratulation to the sober sons of science to behold the refluent wave of opinion rolled back from the impregnable fortress of common sense, fortified by the results of science, sweeping back those doughty knights upon its white crest, destined to land them, with their soap-bubble theories, into the sluggish pool where

> "Thrown when the war of winds is o'er,
> A silent wreck on fortune's shore,
> Then, 'mid sullen calm and stagnant bay,
> Unseen to drop by dull decay."

Time is not permitted to indicate the many sources from which evidence is derived of a re-actionary movement in professional opinion against the teachings of what has been characterized in this paper as the "*laissez faire* School of Medicine;" but indulgence is claimed to indicate one from Prof. Balfour, of the Edinburgh Medical College—under the very nose of Prof. John Hughes Bennett—so incisive in its terms and unmistakable in its tone as to leave no doubt as to the force that is behind it, or as to the objective point to which it is tending. Here it is, and it is believed the profession will have no difficulty in understanding it:

"*From all this we learn that most important lesson, that our power to cut short disease is limited not so much by the processes involved, as by our ignorance of the means to be employed; and that a brighter future for therapeutics may be looked for, once we have shaken ourselves from the idea that* THE PROCESSES OF NATURE CANNOT BE INTERFERED WITH BY ART." (Italics ours).

No great while since, even so profound a medical philosopher as Prof. Balfour could not stand up before an Edinburgh medical audience and enunciate such a sentiment without having coupled with his name some such amiable epithet as *ignoramus* or *old fogy*. A better time is at hand; the crepuscular streaks of a day destined to chase away into their native darkness those *ignes fatui* which have too long usurped the name of science, but which their followers are beginning to learn, instead of emanations from the fountain of light, are only transient exhalations, as such apparitions usually are, from the foul marshes of rottenness and decay.

Among the many indications of progress during the past year, none is more gratifying than the success that has attended the efforts of the profession to prevent the outbreak of disease where it has been wont to prevail, or to circumscribe its ravages where it had already obtained a hold. Physical exploration has reached a stage of advancement, where the belief that an ounce of prevention is better than a pound of cure is not only invoking the best efforts and learning of the profession, but attracting the attention of the public; it is beginning to cut a figure in the deliberations of municipal authorities and of the police regulations of communities, most encouraging to those who, anxious to do somewhat to make the world better for having lived in it, are yet so circumscribed in their efforts that, to do so in the line of their

profession, they feel it necessary to co-operate with the great scheme of sociological progress in such sort, that in the future less pain and suffering shall be endured, and more health and happiness enjoyed.

The success of the past year has been unprecedented. It will be remembered that Europe had not been free from the ravages of Asiatic cholera since it reached the continent from Egypt in 1865. It prevailed during the winter of 1873–4 along the lower reaches of the Danube, and was understood to be extending its ravages into Silesia and Bohemia. The probabilities, even as late as May, seemed to point to the extension of the disease to the whole of Europe and, perhaps, to America. That terrible scourge, the plague, that carried off in the single city of London in 1665, fifty thousand souls, made its appearance during the past year in Messapotamia; a little later in Northern Africa, and yet a little later in Western Arabia. Unlike our pious ancestors of the 17th century, who, regarding its work of death among them as a visitation of Divine vengeance, betook themselves to prayer, fasting and humiliations, the different governments of Europe, Russia taking the initiative, invoked the most vigorous sanitary regulations—the result being that Europe is now entirely relieved from the dread apprehension of a general epidemic of the one, and has entirely escaped from the approach of the other, which at one time seemed most imminent, prevailing as it did in the Tripolitan Regency of Bengazi.

"Post sanitary authorities," says the *London Lancet*, "are increasing in numbers and importance, and their influence in checking the importation and perpetuation of disease is being acknowledged and appreciated." A similar activity has characterized the effort of sanitary authorities in this country and Europe to prevent the outbreak and to stay the deadly prevalence of fever, and, it may be added, with marked success.

Dr. William Budd, in a paper entitled *Typhoid Fever, Nature, Mode of Spreading and Prevention*, estimates that in England alone there are annually 150,000 persons attacked, and 15,000 die of enteric fever, and yet he argues that by the enforcement of proper sanitary regulations, it might be entirely prevented. Dr. Cerfield, of London, and Dr. Austin Flint, of New York, endorse substantially the views of Dr. Budd. "Thus

we are led," according to Dr. Flint, "rationally to the conclusion that drinking-water is a medium by which typhoid fever may be communicable, and is essentially a preventable disease, and its presence in a community shows beyond question that sanitary science is neglected."

The tendency in medical opinion to oscillate from one extreme to another has already been referred to, and finds another exceedingly instructive exemplification in the history of alcohol as a therapeutical agent. The teachings of Todd, Bennett, and others of their school, resulted in exaggerating its efficacy in diseases in which it is of some value, and of extending it to others in which it is not only of no value, but is positively mischievous. So prone is any new practice to run into extremes in a short time, a bottle of brandy, reinforced by another of the *inevitable* quinia, is all that is needed for the cure of maladies in which it is now known to be exceedingly hurtful. Happily for the profession, and more so for their patients, time has been given for the *sober* second thought; and though great abuse of this potent drug still continues, it is being corrected as rapidly as, in the nature of things, such an evil can be remedied. In the mad rush to support nature, physicians, not without some claims to scientific guidance, forget that, though a hydro-carbon, alcohol is neither a tissue nor a heat-producing agent. Its only healthful office is to sustain innervation, and thus to *tide* nature over a crisis; and this not in accordance with the laws that control in normal innervation, as is shown by the fact that in all cases in which nature does not promptly rally, it declines, and animal heat is lowered. In health, experience proves (witness Dr. Kane's Arctic expedition) that the temperature and powers of life hold up much longer when no alcohol is used. Like narcotics, with which it is classed by some, in cases of nervous exhaustion, it quiets irritability; it may help to supplant natural oxidation going on in the system, and in certain debilitated conditions, when the retrograde processes are in the ascendancy over reconstruction, it may be employed to advantage until the proper equilibrium is established between waste and repair, through improved nutrition and assimilation. Beyond this, it would seem to have small claims upon therapeutical confidence.

With the harm inflicted upon society from the abuse of alco-

holic drinks, a calm survey of the facts leads to the conclusion the profession has nothing to do. That its members may not in all cases exert the same influence they should (they are men) may be admitted; but it must be equally admitted that leading minds are and have been laboring for years to arouse the public to a realization of the evils entailed by its use in any other mode than as prescribed by a skillful physician. That the profession is awake to the dangers of its indiscriminate use, witness the reports of the different State Associations, and of the national organizations of this country and Great Britain. Let it not, therefore, be charged upon the profession that it is encouraging drunkenness, with all that drunkenness means. The charge is as untrue as it is unjust.

It is especially gratifying to those who, even during the reign of this modern Baal, have circumscribed their *worship* within exceedingly narrow limits, to observe with what caution its divinity is now invoked compared with previous years. The conscientious medical man puts up no more fervent petition than that which he addresses to Almighty God that the time may speedily come when the profession shall stand a unit, presenting a wall of living breasts between society and this fell destroyer of soul and body, proclaiming trumpet-tongued what a Pandora box of ills in the shape of neuralgias, hysterias, hypochondrias, epilepsies, nervous debilities, arrested physical and intellectual developments, eccentricities, melancholias, idiocies and insanities their fellow men are entailing upon their posterity by an indulgence purchased to themselves at the price of almost all ills to which flesh is heir, and an abbreviation in the aggregate of one-third of their existence.

"Close to us, yet inaccessible to our senses."

Maudsley says: "There lies a domain of nature—that of the infinite little—the operations in which are as much beyond our present ken as are those that take place in the remotest regions of space, to which the eye, with all its aids, cannot yet reach, and of which the mind cannot conceive." As every success in extending the range of the telescope in penetrating abysmal space, opens up to view worlds and systems of worlds, so every increment of power in the microscope discloses new wonders to

the delighted gaze of the patient worker. The results of the year's work in this domain has been most valuable.

In this connection, space is given for a notice of a single medical agent. "Physostigma stands credited upon the authority of J. Crichton Brown, of West-Riding Asylum, England (*London Lancet*), with having cured two cases of paralysis. Supposing," coutinues the *Lancet*, "there to have been no error of diagnosis and no misconstruction of the relation of events, we should say that this is the most wonderful therapeutical achievement of the year." It may be that the *Lancet* man, in common with that portion of the profession devoted to the specialty, remembers that no longer ago than 1871 ergot was credited upon the same authority with being eminently useful in recurrent mania, chronic mania with lucid intervals, and epileptic mania—a credit experience has had to disallow, though there was every disposition to hope that it would stand good—these being precisely the mental affections that give the profession the most trouble, the acknowledged *opprobrium medicorum* of the art. Its control over the dimensions of the vessels conceded, it appeared reasonable, by its action upon the intercranial vessels, to believe that ergot might be useful in the cerebral troubles indicated. Experience, however, has demonstrated what theoretical considerations might have led to suspicion prior to trial, viz: that in exerting its control over the circulation, the ergot would, *pro tanto*, interfere with innervation, already below a normal standard. J. Crichton Brown, who, *it would seem, does not object to a little sensation*, therefore should not suffer himself to be disappointed, should the profession, with some little knowledge of the capabilities of physostigma and a most painful experience of the intractable nature of paresis, be a little slow in crediting an announcement of *two cures*, and that by an agent of doubtful therapeutical value, in a disease of the cure of which, in a single case, evidence is wanting.

It will be recollected that, at the meeting of this body in 1873 the writer of this paper made a report upon *Hæmaturial Miasmatic Fever*. The position assumed in regard to the value of quinine has furnished occasion, as the writer was prepared to expect, for adverse criticism from a certain school in various parts of the South. The matter is revived here to add a remark as to how far subsequent developments, and especially those of

the past year, have served to discredit or strengthen the views therein set forth. The importance of the subject, it is believed, justifies it. Be it admitted *frankly*, *freely*, as was done in the paper referred to, that it is conceded quinine will accomplish all that is within therapeutical competence in an antiperiodic direction, and in the slighter attacks of the disease, such as possess well-marked periods of apyrexia, during which the hæmaturia ceases, to re-appear only with a recurrence of the fever, is just as efficient as in any other case of *intermittent* fever, and upon the same principle. So far, then, there is no difference of opinion. But there is a very different class of cases—cases in which there is little or no remission of the fever, none in the hæmaturia, in which innervation is overwhelmed, and most profound blood changes occur. It may be answered that these cases are inevitably fatal—most of them are—not all. The conviction, not hastily formed, is re-affirmed, that quinine, in this latter class of cases, does positive injury, aggravating the already deranged innervation, and hastening to a fatal termination. It ought to be a matter of astonishment to no one that those who see the disease in its milder form should vaunt this typical antiperiodic as the *remedium principale*, and on the other hand, it should excite just as little surprise that those who have to deal with the disease in its graver aspects should conclude it worthless or even mischievous.

"The fever in all the severer cases that I," (W. A. Caveness. Texas, *Richmond & Louisville Med. Jour.*, July, 1873) "have seen, has been continuous; though, like the ordinary remittent or bilious fever, it has a tendency in favorable cases to eventuate in the intermittent form, and only when this takes place is it necessary to use *quinine*. The truth is, except in the intermittent, paroxysmal or mild form of the disease, quinine *is worse than useless*, and where it is indicated it is unnecessary to give it in enormous doses."

To meet the third indication, *i. e.*, to prevent an additional paroxysm, Dr. E. D. McDaniel, of Alabama—a State in which the severer form has prevailed extensively—who must have seen much of it, says:

"I have *little confidence in quinine*. If the gastric intestinal and cutaneous functions are attended to and properly sustained, I believe that the demand for specific antiperiodics will be by no means great or imperative, and, if in any way temporarily contra-indicated, their use may be for a while temporarily postponed."

On the other side, W. A. B. Norcom, M. D., in an address before the North Carolina Medical Association, of very consid-

erable merit, but marred, it is to be regretted, by want of respect for the opinion of others, is without hope in this disease save that derived from quinine, given in from ten to twenty grain doses every hour. "Let these doses be continued every hour until at least from 40 to 60 grains are taken. *** It is highly important to give every day for three or four days from 40 to 60 grains." The learned Doctor informs us that in this disease "polypharmacy is synonymous with fatality." What does he think of megapharmacy? It is thought not improbable, from the latitude in which he lives (North Carolina), and still more from his account of the cases that have come under his observation, that this gentleman has never seen a typical case of the more malignant form of the disease.

The *Virginia Medical Monthly*, in a not uncomplimentary notice of the report, *supra cit.*; as having been read before this body at its meeting in 1873, criticizes what it is pleased to term its "*anti-quinial treatment*," contrasting it with Dr. Norcom's not less than sixty grains a day of the inevitable, is surprised "that the author who, from the very necessity of the case, must be so familiar with the other actions of quinine, should deny its sedative action in large doses." Now, the author of that paper desires in this connection to say to the editor, Dr. Landon B. Edwards, known as a most accomplished gentleman and polished writer, that he is as far from denying the sedative action of quinine in large doses, as he is from admitting that such action is or (in view of the pathological condition involved) can be other than *pernicious and only pernicious in the worst cases of this malady.* No space is left for proof of the proposition, further than to refer to the belabored, overwhelmed condition of innervation, particularly that of organic life; and as explaining how large doses of quinine would effect such condition, he would respectfully call his attention to the experiments of Herr Henbach, in Prof. Binz's *Pharmacological Institution* at Bonn, regarding the action of quinine on the nervous system.

That the physician, who is one in fact as well as in name, is entitled to consideration among his fellows, nobody, either in or out of the profession, doubts. That the members of the profession at large are not appreciated as the typical physician should be, is granted; but do those who bear the name, and

who claim to share the honors of the profession, approach it in those elements of severe culture, scientific attainments and moral elevation which go to make up this distinguished character? In the development of sociological nomenclature, the medical is named a liberal profession, and its members are spoken of as belonging to the learned class. Is such classification, such recognition, indicative of *fact*, or of usage of society that has become conventional and meaningless? That there are numbers, great numbers, of educated gentlemen in the profession in the United States who devote their lives to the acquisition of such knowledge as in its practical application to the cure of disease, confers a benefit upon their fellows, the value of which cannot be overestimated, is a fact which should cause professional pride and congratulation. But it is no less true that *crowds* are rushing into this high and most delicate calling as the unthinking horse into battle, with no preparation at all adequate for the discharge of its arduous duties, and which preparation is indispensable to meet its profound obligations. Many, indeed, rely for such success as their ignoble aspirations lead them to look forward to, upon the cultivation and exercise of such a bearing to society as is calculated at once to degrade the profession and to debauch public sentiment. Conscious of no worth, knowing themselves to be mere animal fungi, parasites upon the body social—*fruges consumere nati*—mere consumers of the public bounty, contribu tors in no sense to the public weal, and having, therefore, forfeited their own self-respect, as every such man must, is it reasonable for them to claim the respect of others? When looking upon one of these self-important creatures, taking upon himself the responsibilities that necessarily attach to the character of the physician, and claiming at the hands of society the consideration due to such a character, with none of the cultivation required to meet the one, nor any of the elements of true manhood to support the claims of the other, one is tempted to call down upon the miscreant the old anathema: "Wherever fire burns or water runs; wherever ships float or land is tilled; wherever the skies vault themselves, or the lark carols to the dawn, or sun shines and grass grows in his rays; wherever God is worshipped in temples or heard in thunder; wherever man is honored or woman loved—there from henceforth and forever let there be to

him no part or lot in the honor of man or the love of woman. Let Ixion's revolving wheel, the overmantling cup at which Tantalus might not quench his unquenchable thirst, the insatiate vulture gnawing at the immortal heart of Prometheus, the rebel giants, writhing in the volcanic fires of Etna—be but faint types of his doom."

The attention of this body and of the profession generally is respectfully called to the following excerpt from the *Canada Lancet*, as a part of the outlook of the year just passed, as being of the profoundest significance, and as pointing to the real source of the trouble with the profession in the United States. It is folly to talk of professional elevation as long as little cross roads Medical Colleges are *diplomaing* and sending forth ignoramusses. *The Medical Colleges of the United States are alone responsible for the status of the profession.*

"GRADUATES IN MEDICINE.—The graduates in medicine of nine Universities of Prussia, Germany, are compelled by law to present themselves before a "State Board of Medicine," for examination, before they can be licensed to practise medicine in that State. This same law also exists, and is rigidly enforced in the other States of the German Empire ; likewise in Austria, France, England, and in nearly all of the other prominent countries of the world, with the exception of the United States of America.

The following table shows the result of the examinations in Prussia during the past year (1873–4), and conveys also an idea how rigid these examinations are, for about twenty five per cent. of the candidates were rejected ; and we might further add that no candidate is allowed to go up for examination unless he can prove, by certificates, that he has attended at least eight courses of medical lectures—equivalent to four years' study :

Universities.	No. of Candidates.	Passed.	Rejected.
Berlin	124	89	35
Bonn	39	33	6
Breslau	37	32	5
Goettingen	34	32	2
Greifswald	81	61	20
Halle	63	49	14
Kirl	21	18	3
Koenigsburg	45	25	20
Marburg	33	30	3
Total	477	369	108

The sum total of physicians licensed in the whole German Empire for the year 1874, is only 660. During the same year, the innumerable Medical Colleges of the United States of America graduated 3,000 students.

In conclusion, we add for comparison the following table for 1874 :

Country.	Inhabitants.	Practitioners Licensed in 1874
Germany	42,000,000	660
United States	40,000,000	3,000

Further comment is unnecessary."

In a recent work entitled *Anecdotes of Public Men*, John W.

Forney, who, for the last thirty years has occupied a position for observing men and things in this country enjoyed by few, says: "Few physicians enter public life, though many of them are active politicians. They seem to prefer the field of science to the field of party. Yet, there is no class capable of exercising more power." This language of the wily politician is quoted to make an occasion for adding: While it is hoped the medical profession will abate nothing of their preference for the field of science—their most legitimate sphere of action—it is believed they do not attempt to wield the political influence which their relative talents and the important interests of which they are the recognized guardians, make it their imperative duty to exercise. While the members of the legal profession are everywhere awake to the importance of having as large a representation as possible in both the State and National councils, those of the medical profession, believed inferior to the legal in no respect, seem to feel no responsibility in regard to those interests of which they are the recognized conservators. Several instances are remembered as having occurred during the past year in which these have suffered from this source of neglect. It is not the purpose of this report to encourage a prurient hunt for office; but it is believed a proper self-assertion and sense of responsibility in regard to the interests of the greatest moment, should awaken a corresponding attention to the duties of good citizenship in this respect.

In glancing over the list of those noble workers who, during the present year, ceased their earthly labors and joined the majority on the other side, one will be pardoned if he pauses and drops a tear on the newly-made grave of him whose name is but to be mentioned to awaken a responsive throb of melancholy sadness at his untimely fate. That name is *Edmund Francis Anstie.* Science mourns her devoted son. Let her votaries drop the sympathetic tear. *Sibi levis terra sit.*

The writer would invoke the largest measure of indulgence. He feels that, amid the distractions incident to his surroundings, he has contributed his mite—has done what he could in the interest of that noble science of which Rome's greatest orator and scholar said, *Homines in nulla re proprius ad deos accedunt quam homnibus salutem dando*—a science than which, with all

its imperfections and short-comings (the religion of the Lord Jesus Christ excepted) nothing on this planet comes nearer to, stirs more profoundly his heart, or fires his entire being to labor on, labor ever for its advancement and perfection.

ART. III.—*A Case of Chronic Cystitis—Operation for Artificial Vesico-Vaginal Fistula, by Dr. Thomas Addis Emmet—Death from Interstitial Nephritis—Autopsy.* Reported with Remarks. By GEO. T. HARRISON, M. A., M. D., Assistant Physician to the Woman's Hospital of the State of New York, New York.

The operation of making an opening into the bladder when the seat of chronic inflammation, with the view of allowing the urine to drain off as fast as secreted, is a modern therapeutical resource. From Dr. Emmet's very interesting and instructive paper, contained in the *American Practitioner* of February, 1872, we ascertain that Prof. Willard Parker first performed such an operation for the relief of chronic cystitis in the male, in the year 1850. In the winter of 1858, Dr. Emmet informs us that he removed, through an opening made in the vesico-vaginal septum, a calculus from the bladder of a patient in the Woman's Hospital. "As the bladder was in a diseased condition, by the advice of Dr. J. Marion Sims, the artificial opening was left for the greater facility afforded in the treatment for restoring the organ to a healthy state. This idea was a new one to me at that time, and to Dr. Sims, I believe, is due the credit of the mode of treatment for cystitis in the female resulting from this cause. For the relief of a case of chronic cystitis following exposure and of long standing, I subsequently made an artificial vesico-vaginal fistula, with the view of giving rest to the organ by the free escape of urine. It was thought that by thus removing the exciting cause of the persistent tenesmus, the hypertrophy of the walls of the bladder would subside. Since that time it has seldom happened that some case has not been under treatment by this method in the Woman's Hospital."* Dr. Emmet quotes Dr. Parker for the following *a priori* ground for the justification of the operation. "The object in view was to open

* Vide *Amer. Practitioner, loc. cit.*

a channel by which the urine could drain off as fast as secreted and thus afford rest for the bladder, the first essential indication in the treatment of inflammation." Dr. Emmet comments on this as follows: "The conception of treatment was perfect, and there has been no advance made since in the pathology."

The reporter would suggest that this is by no means an exhaustive explanation of the good effects accruing from the therapeutical procedure now under consideration. When the bladder is the seat of a chronic catarrh, the urine which collects in it undergoes an alkaline fermentation. It is out of place here to discuss the question whether this alkaline fermentation be the result of the action on the urine of low organisms, as suggested by Niemeyer, or whether the mucus alone can set up such fermentation. Be this as it may, the urea, as the result of this alkaline fermentation, becomes decomposed into ammonium carbonate, and thus originate ammoniacal compounds, ammonium urate and ammonium-magnesium phosphate, which exercise a highly irritating influence on the mucous membrane of the bladder. After the establishment of an artificial fistula, no such fermentation can take place, as the bladder mucous membrane is continually washed by the normal kidney secretion, and no stagnation of the urine ever occurs. This great source of irritation being removed, the distressing tenesmus which is consequent upon it ceases, and the muscular coat of the bladder no longer necessitated to contract, leaves the organ at complete rest.

Whilst this method of treatment has become, mainly under the influence of Dr. Emmet's teaching, and the brilliant results obtained by him, the established therapeutical procedure in obstinate cases of chronic cystitis in this country, it has only recently begun to attract attention to its merits in England and on the continent of Europe. Prof. Hegar,* of Freiburg, without being aware that Dr. Emmet and other American surgeons had been using this method for several years, operated, in the year 1868, on a female suffering with chronic bladder catarrh, by making an incision through the vesico-vaginal septum. His patient was much benefited, though subsequently died of kidney disease. Subsequently he operated upon a second case with a similar experience. A third operation, however, was attended with bril-

*Vide *Die Operative Gynækologie*, &c., von Hegar & Kaltenbach.

liant results. The patient, who had also pyelitis, was restored to excellent health from a condition of extreme suffering.

Mary McLane, age 45, single, admitted into the Woman's Hospital of the State of New York, *December* 12, 1873. This patient says she has been sick for the past year, complaining principally of frequent micturition and a most annoying tenesmus. The diagnosis of chronic cystitis was made. The bladder was washed out with warm water twice daily.

January 13, 1874.—Dr. Emmet decided upon making an artificial vesico-vaginal fistula, as the patient's sufferings were so intense that her health was rapidly failing. In fact, it would be hard to paint in too dark colors the picture of abject wretchedness presented by this patient's condition at this time. The intolerance of the bladder toward its contents caused an almost constant desire to void the urine. There was no such thing as rest at night, sleep being continually interrupted by the calls to empty the bladder. The appetite was gone; the nutrition, as may be well imagined, greatly impaired, and the nervous system shattered. Life was a burden. The operation is thus described by Dr. Emmet:*

"A sound, somewhat abruptly curved an inch and a half from its extremity, was introduced through the urethra. While held by an assistant, with its point firmly pressing in the median line against the base of the bladder, a little behind the neck, the projecting tissue on the vaginal surface was seized with a tenaculum, and divided by a pair of scissors directly on the point of the sound until it could be passed through into the vagina. With the sound remaining in the opening as a guide, one limb of a pair of scissors was passed alongside into the bladder, and the vesico-vaginal septum divided backward in the median line. *** The object in cutting on the point of the sound is to be sure that the bladder and the vaginal surface are divided in correspondence, for there is so much mobility of one surface over the other that it is exceedingly difficult to enter the bladder unless the parts are transfixed."

Jan. 29.—The fistula has been kept from healing by passing the finger through it from time to time. The bladder has also been washed out twice daily through the urethra with hot water. The patient has derived immense relief already from the operation; can now eat and sleep well. A small, highly sensitive and irritable tubercle was removed from the meatus by the scissors.

Feb. 5.—Dr. Emmet examined the patient in the knee-elbow position, and found quite a number of granulations cover-

*See his work on "Vesico-vaginal Fistulæ," p. 43.

ing a considerable area of the mucous membrane of the bladder, seated, not only at the base, but also at the fundus. By separating the edges of the fistula, the granulations were touched with carbolic acid.

March 17.—Some large, flabby granulations which obstructed the fistula, preventing the free escape of the urine, were twisted off, a silver suture being passed on each side to control hemorrhage.

April 14.—As the bladder mucous membrane protrudes through the opening and prevents a free discharge of the urine, an instrument devised by Dr. Emmet, made of glass, called a stud, was inserted into the opening. This was used for several weeks; and then, *April* 24, removed and replaced by a glass tube, which served a better purpose in the way of drainage. The patient continued to do well, and on the 29th of *June*, 1874, was sent home to return in the fall.

September 25.—Patient re-admitted. Is feeble, and has lost flesh and strength since June. An abscess opened in the left lumbar region, which discharges freely, and seems to communicate with the left kidney. So far as the bladder is concerned, the patient has very little inconvenience. By good, nutritious diet, cod liver oil and iron, efforts were made to build up the patient's general health.

March 9, 1875.—As the urine does not flow freely through the opening, and as, in spite of all efforts to the contrary, the edges have partially healed together, it was decided to enlarge the opening—the patient being under ether. After enlarging the opening to the requisite extent, Dr. Emmet passed in wire sutures on each side to pucker the edges of the fistula and keep them separate. The patient, however, never recovered from the effects of the ether. She complained, when restored to consciousness, of a burning sensation in her chest—had constant vomiting. A number of not very well-marked uræmic convulsions were noticed.

March 11.—Slightly delirious.

March 13.—Died comatose.

Autopsy 12 hours after death. *Uterus* retroverted; fibroid tumor attached to anterior wall about the size of an almond, and almost entirely calcified. *Bladder* small; walls thickened; mucous membrane congested; a few small granulations near the fistula. *Kidneys*—Right kidney atrophied, measuring one and a half inches in diameter; cortical and medullary portions entirely gone—the organ consisting of a cyst, with calcified walls; its ureter was an impervious cord. The left kidney was enlarged to almost double its normal size, and was firmly adherent to the

posterior abdominal wall at the site of the abscess which opened externally in the lumbar region. The pelvis of the kidney was distended with pus, which also filled the ureter down to the bladder. The mucous membrane of the ureter was in a disorganized condition. The tissue of the kidney was the seat of several large abscesses isolated. Almost the whole kidney structure was disintegrated, except a small portion about the size of an almond, and this was in a state of fatty degeneration. At the junction of the ureter with the pelvis of the kidney there was a small opening communicating with the abscess in the lumbar region. Autopsy made by Dr. J. N. Beekman, pathologist of the Woman's Hospital.

From the history of this case, we learn, incidentally, the danger of the administration of an anæsthetic when the kidneys are the seat of chronic degeneration. But the great interest which attaches to the case is the proof it furnishes of the value of this operation of making an artificial opening into the bladder to allow free drainage, in cases of chronic, intractable cystitis. Here, as the result of the operation, the bladder was restored to a nearly normal state, and, if there had been no kidney complication, that it would have become perfectly healthy in a short time, may be fairly assumed. The operation, too, commends itself on the score of the mitigation of the sufferings of the subject of cystitis which results from its performance. After the fistula was made in this case, the patient improved at once, and, as compared with her previous sufferings, her condition from that time until death closed the scene was one of tolerable comfort. In truth, the bladder gave her but little annoyance—the kidney complication being the main cause of discomfort.

ART. IV.—*European Medical Notes.* By GEORGE HALSTED BOYLAND, M. A., M. D. Late Surgeon in the French Army (Médaillé), etc., etc., Baltimore, Md.

I. *Local Treatment of Chronic Tumors of the Spleen.*—In the *Deutsch. Archiv. für Klin. Med.*, 15 Band., 2 Hept, 1875, Prof. Mosler (Greifswald) mentions the following new method of reducing chronic tumors of the spleen. He tried with good results injections of the tincture of iodine upon animals. On man he used, in one case, injections of dilute carbolic acid, and later, those of solut. arsen. Fowleri. In a woman patient, 33 years

of age, who, during a period of one and a half years, had been suffering from intermittent fever, followed by abdominal typhus, from which affections she had not recovered, and was therefore several times under treatment on account of hydrops, vomiting, diarrhœa, pains, etc., the spleen presented the following conditions: Easily palpable, the forward end of the organ could be felt in the ventricular region, and, according to the percussion, had an evident enlargement of 15 centims., or about 5 inches from above downwards, and extended 13 centims. beyond the linea axillæ in the direction of the linea alba. The liver also was enlarged; there was a distinct *bruit* in the heart; other organs normal. Mosler at first employed, twice daily for 16 days, subcutaneous injections of a solution of one part of chinin hydro-chlor. amorphus to 5 parts of water, followed by the application of the ice bag, with but little effect (the long axis of the spleen was now 11 centims). As iron and quinine, in various preparations, did not attain his object with sufficient rapidity, he determined to begin a local treatment. An ice bag was therefore applied for several hours over the region of the spleen in order to diminish the blood capacity of that organ through contraction of the lienal muscular fibres. Then the forward end of the spleen was supported closely against the wall of the abdomen by means of a bandage. A very sharp Pravaz syringe was next thrust through the abdominal wall into the parenchyma of the spleen, which was injected with 22 drops (the full capacity of the syringe) of a 2 per cent. carbolic acid solution. It could easily be felt that the parenchyma of the spleen offered a marked resistance to the syringe. During the injection, the patient complained of violent pain, and for this reason 2 ctgrs. (or gr. $\frac{1}{3}$) of morphia was immediately after injected at the same place, and during the next 24 hours the ice bag was left upon the lienal region. No alarming symptoms followed; but notwithstanding the continued use of quinia and iron pills, a certain degree of tumor still remained. Mosler made, therefore, a second parenchymatous injection, and chose this time the solut. Fowleri, (1 part to 10 water), injected in the same manner, and again employed the ice bag, etc. These injections were finally repeated several times: the spleen had gone back a distance of $4\frac{1}{2}$ fingers from the linea alba, and now extended only 5 centims. beyond

the linea axillæ. The diminution of this organ still continued to a later period. The patient, after having been 6 months under treatment, was discharged considerably improved.

This case, certainly a very remarkable one, is of decided clinical value. The local treatment of tumors of the spleen is a subject overlooked by some authors, and only slightly touched upon by others. The combined action of an irritative disinfectant and an anti-spasmodic in an instance of this nature commends itself to our reason ; the result was excellent, as will be noticed from the fact that when the patient first underwent active treatment, the spleen extended 13 centimetres beyond the axillary line, passing the same by only 5 centimetres the day of her discharge from the hospital. The case partakes somewhat of the character of an experiment, which, however, merits imitation, and which, it is hoped, may prove as successful in the hands of our American *savants* as it has in those of Prof. Mosler.

II. *The Incubation of Abdominal Typhus.*—Prof. H. Quinke, of Bern, writes in the *Correspondenzblatt für Schweizen Aerzte*, 15th April, 1875, upon the ætiology and incubation of abdominal typhus, after having had occasion to observe numerous cases during an epidemic at Müsingen. This epidemic broke out several weeks after a fair. Fourteen cases closely observed by Prof. Quinke and other physicians, led him to the following conclusions: (a) The typhus infection was contracted by a single visit of several hours (up to 12 hours) at Müsingen ; (b) the period of incubation until the appearance of febrile symptoms was from 12 to 16 (average 14 days); (c) frequently the first temporary gastric disturbances were observed on the second to the fourth day after infection ; (d) with some probability can the use of drinking-water contaminated with typhus dejecta be regarded as a cause of infection. As for the rest, great differences in the period of incubation in typhus can easily occur, and on this ground the quantity of poison received into the system varies—the chemical change of the same (for instance, through the gastric juice) or its increase takes place with different grades of rapidity ; finally, the ways of introduction open to the poison (drinking or breathing) are different.

Too much attention cannot be paid to one point among the above, and that is the propagation of typhus abdominalis by means

of the drinking-water. During a visit to Bonn on the Rhine, in the summer of 1867, the school of Dr. Kortegan, which near relatives of mine were attending, was entirely broken up and the scholars obliged to return to their homes on account of an epidemic of typhoid fever confined to that institution alone. The ætiological motor could not at first be ascertained. It was, however, soon discovered that the privy, and well from which all the drinking-water was obtained, were separated from each other only by an earthen wall, through which the one filtered into the other—the privy being a few feet higher than the well. This epidemic resulted fatally in a few of the cases. Doubtless more typhoid fever is disseminated by foul drinking-water than is generally supposed. Although eminent physicians are now recognizing more than formerly the drinking-water as an active carrier of typhoid infection, they have not yet arrived at the conclusion, as has been done by Henry Blanc, that the drinking-water is the *principal* ætiological motor in typhoid fever. Moreover, many cases, in which the primary cause has not been satisfactorily ascertained, are most probably traceable to this source—which is too often entirely forgotten, or considered as only of minor importance.

III. *Effect of Jaborandi on the Heart.*—Prof. Vulpian has made several experiments in this direction, the results of which he communicated to the *Société de Biologie* on March 3d. His résumé is as follows: If we inject the extract of jaborandi in the femoral vein of a dog, considerable disturbance in the circulation will soon be observed; especially notable is the diminished frequency of the pulse. The action of the heart sometimes ceases entirely, so that the death of the animal appears accomplished. The lessening in the number of pulse beats caused by the jaborandi is easily averted by an injection of the sulphate of atropia. By this means, the heart again goes back to its regular movement and re-assumes its normal *rhythms*. On the frog these phenomena are more salient; the heart stops beating at once; but under the influence of certain poisons upon the action of the heart, this organ ceases its function in the *systole*, while we find the action of the heart of animals killed by jaborandi widened in the *diastole*. If, before the injection with jaborandi, the sulphate of atropia be injected, the effect of the jaborandi, no matter how great the quantity used, will be null.

Unfortunately, Prof. Vulpian makes no mention of quantity, leaving us entirely in the dark as to what amount of the antidote should be used to counteract the effect of an unknown amount of a poisonous drug. The experiments, therefore, however interesting, must, for this omission, lose much of their practical worth. The *Pharmaceutical Journal*, of January 16th, informs us that jaborandi was first introduced, by Continho, into Paris, where the drug has now come into general use. It is prepared from a shrub growing in the empire of Brazil. The leaves, resembling in form and size those of the bay tree, have a powerful diaphoretic and sialagogue effect; 50 grains of the powdered leaves swallowed in an infusion by Mr. Martindale, the author of the paper in question, produced, in fifteen minutes, profuse sweating and an excessive flow of saliva; distant vision was obscured, while he could read or see near objects with his customary distinctness; the pupil was but little affected, if at all, slightly dilated. Since then, several articles, containing a long list of experiments, have appeared in various foreign journals confirming the statements of Dr. Continho as to the diaphoretic and sialagogue properties of jaborandi, which indicate its therapeutical application. The dose is from 60 to 90 grains (for an adult), infused in boiling water. Joborandi also causes pain over the pubes, with desire to pass water—the pain subsiding when the bladder is emptied.* These facts make it probable that jaborandi causes contraction of the bladder, for it does not augment the quantity of the secretion.

This drug may, then, prove to be valuable in cases of senile atony or atrophy of the bladder—incontinentia urinæ (?) etc. The result of experimental research in this direction is as yet wanting.

Salicylic Acid becomes more soluble in water, and its antiseptic and disinfecting properties are considerably increased by combining it with sulphite of sodium; 2 parts of latter, 1 of salicylic acid, and 50 of water give a clear solution which does not irritate wounds (*Phar. Centralb.*) Mr. Toussaint (N. Y.) says ammonium phosphate increases the solubility of an equal weight of salicylic acid in water and glycerine. Salicylic acid, ammon. phosphate $\overline{aa}$ gr. x, water, glycerine, $\overline{aa}$ ℥ij, mix, make a permanent solution. *Amer. Jour. Phar.*, June, 1875.

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*The Lancet, January 30th, 1875.

ART. V.—†*Apparatus for the Treatment of Anchylosis and Cicatrices of the Fingers, resulting from Burns or other Injuries of the Hand and Fingers, involving the Metacarpo-Phalangeal and Phalangeal Joints.* (Synopsis of remarks made before the South Carolina Medical Association, April, 1875). By FRANCIS L. PARKER, M. D., Professor of Anatomy in the Medical College of the State of South Carolina, Charleston, S. C.

I propose to describe a very simple apparatus which I have used successfully in three cases of anchylosis of the fingers at the metacarpo-phalangeal joints.

Two of these cases resulted from severe burn of the hand and fingers. In one instance there was anchylosis of all the fingers at the metacarpo-phalangeal joints, with extensive cicatricial bands uniting all the fingers as far as the first phalangeal joint. In the second, this condition was confined to the middle, ring and little fingers. In both of these cases attempts had already been made to divide the cicatrices, to break up the adhesions at the joints involved and to make a useful hand. These attempts failed on account of the ulceration which soon took place from the bandages necessarily applied to the cicatricial surfaces, the fingers having been burned to their extremities. In the third instance, I used the same apparatus modified to suit the ring finger which was anchylosed at the metacarpo-phalangeal joint, the result of an injury from a pistol ball.

The chief difficulties which beset the surgeon in treating cases of serious burns of the hand and fingers are, first, the formation of cicatricial bands which are developed between the fingers ending in that condition usually described as "webbed fingers;" and second, the danger from contraction or anchylosis of some or all of the joints involved. These conditions are occasioned by ulceration from pressure of the dressings used in the treatment immediately after the injury; and the unwillingness of the patients, particularly if in children, to submit to the necessary manipulation of the joints, which would prevent the formation of adhesive bands and which so often results in permanent contraction and anchylosis.

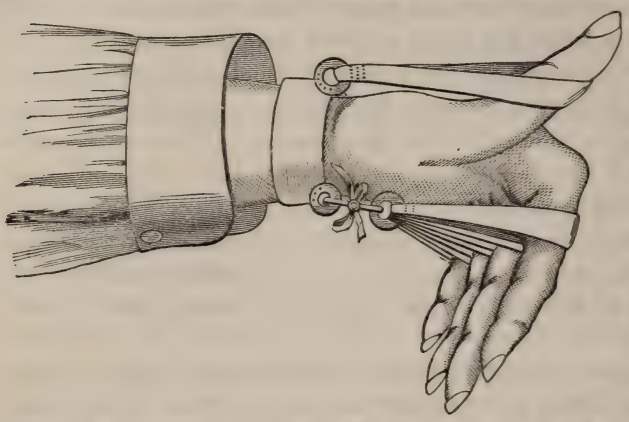
†This paper is published coincidentally in the *Charleston Medical Journal and Review*, of which the author is Associate Editor.

If the case comes up for treatment, as very often happens, after the burns are healed, and anchylosis or partial anchylosis of some of the joints, but more particularly of the metacarpo-phalangeal joints, has already taken place, impairing the usefulness and looks of the hands, it is a simple matter to divide the cicatricial bands and to break up the adhesions under chloroform; but the after treatment, apart from the tendency to reformation of the bands, is often seriously interfered with by ulceration of the cicatricial surfaces covering the backs of the fingers which in many cases prevents the successful application of almost any confining bandage; the patient is not relieved while he may have been subjected to much additional suffering and inconvenience.

The same result often follows in cases where the surgeon, after first dividing the cicatricial bands uniting the fingers, treats the hand by strapping it to a board-hand with the fingers widely separated until the parts are healed, and subsequently breaks up the adhesions of the joints, and then endeavors to overcome the contractions or anchylosis by placing a ball in the palm and confining the fingers upon it. It is at this stage that his efforts to make a useful hand fail; the cicatricial surface on the back of the fingers being of low vitality ulceration ensues, the patient rebels and very often the case is abandoned—not that it is beyond the reach of surgery, but because no class of cases requires more patient care on the part of the surgeon or more firmness and patience on the part of the patient or their parents, as we see these cases most frequently in children. Such certainly was my experience in the cases about to be reported.

The apparatus (see engraving) consists, first, of an ordinary wrist-band, made of leather or cloth, with a small ring or loop attached to the palmar surface—the buckle, if made of leather, or the lacing, if made of cloth being on the dorsal surface of the wrist. Second, of four pieces of bandage an inch wide if for an adult, or half an inch wide if for a child, of graduated lengths to suit the fingers, which are placed over the first phalanx of each finger when fully flexed, and which extend back to the ball of the thumb where they are attached to a small ring. After the cicatricial bands have been divided, the adhesions broken up, and the fingers are well flexed, the loop is placed over each finger

and the two rings are fastened together by a piece of tape. By this means the fingers are retained in the position the surgeon



(The ring to which the strap attached to the thumb is fixed, is in practice placed on the back of the wrist, instead of as in the cut.)

wishes them—at any angle with the metacarpal bones; he can regulate this from day to day as he pleases. Should the thumb be also involved as happened in my first case, a separate loop is passed over it after dividing the bands uniting it to the forefinger, and also the tendons of the muscles of the ball of the thumb subcutaneously, all of which are more or less contracted; the loop is then secured to a second ring or fastening on the dorsal surface of the wristband.

When the apparatus is thus applied, the separate loops confining each finger are only in contact with the dorsal surface of the first phalanx, leaving the joints free, and produce very little pressure, since little force is required to keep the fingers flexed after once the anchylosis or contractions have been overcome. The inner or lower border of the loops of bandage fit closely down between the digital spaces and effectually separate the surfaces of the divided cicatrices. The rest of the fingers are uncovered, so that the patient can easily make passive motion as often as he pleases. The surgeon dresses the hand daily, adjusting clean loops if necessary, and makes vigorous motion of all the joints. Some additional dressing may be applied if the discharge is very profuse, which the patient can remove and replace several times a day.

After the mobility of the fingers is secured, the apparatus is dispensed with, the cicatricial surfaces are still raw, and as

healing goes on the cicatrices may reform, but the motions of the joints are free and the patient has a useful hand. This result is not attained without care and patience and occasionally by dividing a tendon which has either escaped observation previously, or which may require a second or third division subcutaneously. I have seen two cases of congenital deformity (hereditary) sometimes occuring where two or more fingers are united together. In both of these cases the bands had been divided by the family physician, but from imperfect after-treatment the adhesions had reformed and the operation was a failure. In such cases, if the plan of first passing a large metal ring through a hole made in the cleft, and worn like an ear-ring till the sides of the hole have become cicatrized, has been previously adopted, the application of this simple apparatus would, I think, readily overcome the difficulty. The two cases referred to were in adults who declined being operated upon and the experiment was not tried.

I append the following cases in which the apparatus above described was used:

Case I.—*May* 1, 1867. H. G. T., male, mulatto, healthy, aged 26. Two years ago, February, 1865, both hands severely burned, are now covered with cicatricial tissue on both surfaces from the wrist to the tips of the fingers; the fingers are tied together as far as the first phalangeal joint; in some of the fingers the first or second phalangeal joints are anchylosed; all the metacarpo-phalangeal articulations are anchylosed, and the fingers are in a permanent state of extension. The thumb of the right hand is bound to the forefinger by cicatricial bands, preventing extension or abduction. In the left hand, the thumb is not much affected. The tips of the thumb and index finger cannot be brought into apposition in either hand. The patient is a tailor by trade, but has not been able to thread a needle or to sew since the accident; he also wrote a good hand but cannot now use his pen; he cannot button his clothes—his wife dresses him.

He informs me that the right hand has been operated upon twice by his medical attendant; that for a time the hand and fingers were fastened to a "board-hand;" subsequently, the fingers were apparently well separated, the anchyloses of the joints were broken up, and the fingers were flexed over a ball in the palm, and secured in this position by bandages. Ulceration soon took place over the joints, treatment was discontinued, and the fingers soon returned to their former condition. I first adopted the same process with a similar result. I then resorted to the

method here indicated. I first divided the cicatricial bands between the fingers and several of the extensor tendons, which were adherent to the skin over each phalanx, and forcibly broke up the adhesions of the metacarpo-phalangeal joints, bringing the fingers in a position of extreme flexion, and secured them by the apparatus as previously described. I then separated the thumb and forefinger, divided the extensor tendon over the first phalanx and the tendons of the muscles of the ball of the thumb subcutaneously, all of which were contracted; forced the thumb outwards and backwards, and fixed it in position by a separate loop passed over the palmar surface of the first phalanx, and attached it to a ring on the dorsal surface of the wristband. Some additional dressings were applied to catch the discharge, which were removed several times a day by the patient. I made passive movement of the joints daily, and re-adjusted fresh loops as often as cleanliness required.

At the end of two months, the patient had good use of his hand. He now writes as well as ever, and is able to resume his trade as a tailor. The cicatrices reformed in the healing process, but do not interfere much with the mobility of the fingers and thumb. The left hand was very much in the same condition as the right, except the movements of the thumb, which were nearly normal. He has not permitted a similar operation upon it. Eight years have passed, and the usefulness of the right hand continues. The patient was exhibited before the State Medical Association at the late meeting.

Case II.—*August*, 1867. Patient a negro child aged about eight years. The left hand had been severely burnt; the middle, ring and little fingers were permanently extended; cicatricial bands united them; there was partial anchylosis of the metacarpo-phalangeal and some of the phalangeal joints. The case had been previously operated upon unsuccessfully. I cut the extensor tendons over the metacarpal bones, divided the cicatrices, broke up the adhesions of the articulations, and applied a modified form of the apparatus exhibited with a favorable result. Subsequently, the same process was adopted in reference to the phalangeal joints affected, and finally a satisfactory cure of the deformity was obtained.

Case III —Mr. M (date not retained) accidentally shot himself with a Deringer pistol through the metacarpo-phalangeal joint of the left ring finger. The heads of both bones were injured, and the extensor tendon was partially severed. Thinking that the tendon might unite and become useful, the finger was treated in the extended position. Some exfoliation of the heads of the bones ensued, partial anchylosis followed, but the extensor

tendon seemed intact. I now lost sight of the patient. Some time after, he applied for relief on account of the inconvenience of the stiffened finger. Adhesions having formed between the tendon, skin and the fascia, they were freely dissected apart above and below the tendon, which was then divided; the adhesions were broken up, and a single loop was passed over the first phalanx and secured to the wristband. A good success followed.

An important item in the treatment of all contracted tendons resulting from burns or direct injury, is a free dissection of the adhesions to the skin and fascia at the point selected for division of the tendon. The neglect of this simple precaution is often damaging to the success of these apparently trivial operations.

Clinical Reports.

A Case of Intestinal Obstruction of Twelve Days' Duration Relieved by Dieulafoy's Aspirator. Wm. D. Hooper, M. D., (Read before the Lynchburg Medical Society) Lynchburg, Va.

I received a telegram March 31st, 1875, from my friend, Dr. L. H. Keller, of Blue Ridge Springs, Va., to come at once prepared to operate on a case of intestinal occlusion. On my arrival, I found the patient, A. B. G. Maddery, a robust octoroon, aged 17, suffering greatly from over distension of the abdomen and dyspnœa; extremities cold; temperature 99½°F.; pulse 140; mind clear. I am indebted to Dr. K. for the following history of the case, which I will give in his own words:

"I was called to see Maddery March 28th, 1875, and learned that he had had no evacuation from the bowels since the 19th of the month; previous to this time he was predisposed to attacks of constipation, which lasted several days, but would yield to home treatment; otherwise healthy. The week before I saw him he had been treated by a neighboring physician with various enemas, baths, calomel, croton oil, blisters, &c.

I found him suffering great pain over the abdomen, but no tenderness upon pressure; the tympanites was almost as great as the night you saw him; respiration hurried; temperature ranged from 98° to 99½°F. during my attendance; usual rate of pulse 120; anorexia, great thirst, and frequent desire to go to stool; the kidneys acted freely.

Sunday, 28th.—Relieved the pain with morphia administered

hypodermically, and gave him ol. ricini ℥ii, ol. tiglii gtts. iij. An hour afterwards, gave him an injection of a strong infusion of tobacco, which was repeated in an hour, only bringing away bloody clots. Rested well at night, after repeated doses of morphia.

Monday, 29*th*.—Repeated tobacco injection, with no good result. At night administered a large injection of warm water; no effect; continued morphia.

Tuesday, 30*th*.—Gave him half pound of mercury in the morning, and applied mustard to the spine. Administered 30 minims of tincture assafœtida every hour until he had taken two drachms; did not rest well at night; vomited about a quart of thick, green matter—not stercoracious.

Wednesday, 31*st*.—Kept him quiet with morphia until your arrival."

As before stated, I found him with the abdomen enormously distended, and suffering greatly from dyspnœa, extremities cold, stomach very irritable, had not retained food for three days, would not retain water now. The attendants showed me a night vessel, containing nearly half a gallon of thick, slate-colored mucus, with a peculiar odor, but not stercoracious, which he had vomited during the evening.

After examining the usual points for hernia, and making a rectal examination without discovering the seat of obstruction, we concluded the only course left to pursue was to draw off the gas from the intestines, so as to relieve him from the dyspnœa, and, perhaps, enable us to find the point of obstruction. Having attached the smallest needle of Dieulafoy's French instrument, I inserted it at three different points in the left iliac region, the most tympanitic portion of the abdomen, and drew off a drachm of viscid, light pink mucus, and about three cubic inches of gas, which had an intestinal but not fecal odor. Failing to produce any other effect, I withdrew the needle and inserted it in the region of the cœcum without result. Detaching the needle from the instrument, I inserted it about an inch to the right, and half an inch above the umbilicus. Instantly there was an escape of gas which had a decided fecal odor, combined with that of assafœtida. So great was the pressure of gas, it caused a musical sound in its passage through the needle. After the gas ceased to escape, I attached the aspirator, and drew off an ounce of yellow, fecal fluid, together with more gas. This

gave him great relief from pain, and the difficulty in breathing. In a little while, he expressed a desire to go to stool, and in doing so, passed a large quantity of gas *via naturalis*, together with half a pint of grey, semi-fluid fecal matter. I noticed that the first four punctures would excite the intestine to violent peristaltic motion, but the fifth produced no such effect.

Dr. Keller writes, under date of April 28th, 1875: "For a few days, his stools were of the same character as the night you were with him; then for several days he passed hard masses. He passed the mercury at different times at intervals of 2 hours, on the 13th of April, just two weeks after its administration. No symptoms of inflammation presented themselves at any time after the punctures were made."

The physician attending the case before Dr. Keller took charge, adopted the rather novel method of distending the lower bowel with carbonic acid gas, by first injecting a solution of bicarbonate of soda, then following with an enema of vinegar. This procedure was not a success.

In looking over the current medical literature of the day, I have not been able to find the record of a case where the aspirator has been used for intestinal occlusion, except in cases of strangulated hernia; nor was I aware that the subject had been alluded to until a few days ago, when I found a little monograph of Dr. Dieulafoy, dated Paris, 1872. On page 12, he says:

"L'aspiration sous-cutanée est encore destinée à expulser les gaz qui s'accumulent en si grande quantité dans les occlusions intestinales, dans la fièvre-typhoïde, et que deviennent dans quelques circonstances une cause puissante de dyspnée."

I intended, if I had not relieved the patient, to make an incision through the abdominal walls, and puncture the intestine with the number one needle, above the point of obstruction. In so doing, I thought we would be acting on the same principle as puncturing the bladder in over-distention caused by stricture of the urethra; as soon as the pressure is relieved, the obstruction is overcome. Some may think that the simple puncture of the needle excited peristaltic motion sufficient to overcome the obstruction. I think not, for if so, he would have been relieved by the first three punctures, which were thought to be below the point of occlusion.

This seems the most rational method of treating obstruction

of the bowels, for it not only relieves the distressing dyspnœa, as Dieulafoy suggested, but is a direct means of overcoming the obstruction itself, and is comparatively free from danger.

I hope some of my medical brethren will try it in their first case of intussusception, and let us hear from them.

A Case of Tetanus Treated by Chloral-Hydrate—Recovery. H. Otis Hyatt, M. D., Kinston, N. C.

Jan. 5, 1873, I was called to a negro boy, aged 15 years, who, a few days previous to my visit, had been out hunting. His gun having been accidentally discharged, a greater portion of the load of bird-shot, and part of the wadding, passed through the left hand. The load entered on the inside of the metacarpal bone of the little finger, tore up the muscles of the palm, and passed out near the carpo-metacarpal articulation of the thumb. Some of the shot and a greater portion of the wadding remained in the track of the wound. A botanic doctor was sent for to see the boy. The only thing he did, so far as I could ascertain, was to sew up the wound of exit. Tetanus was shortly developed; the condition of the patient was reported to the owner of the plantation, who came over to town and requested me to go out with him and see the case.

At the time of our arrival, the boy was having tetanic spasms every fifteen minutes, and had some fever; appetite good; strength good. I brought him under chloroform, took out the stitches, and after picking out a large piece of wadding and several shot, slit up the wound from the point of egress to the point of ingress, and found the whole canal literally filled with wadding and powder.

Thinking this a good case on which to try the effects of hydrate of chloral, I gave him a solution containing thirty grains to the teaspoonful, and directed him to take a teaspoonful every hour until relieved. This was continued four days—the patient taking, during each twenty-four hours, *seven hundred and twenty grains of chloral*, with no other effect than to lengthen the period between the convulsive seizures to half an hour, during which time he was enabled to sleep. I then put him upon the extract of calabar bean—gr. $\frac{1}{30}$th—every half hour, with direc-

tions to continue the dose until the spasms abated in frequency and intensity, and afterwards to repeat the dose as might seem necessary. After the first dose, his mother says, he had no more spasms. She repeated the dose three or four times a day. After the expiration of twenty-five days from the commencement of the attack, I ordered the medicine to be discontinued. The boy made a good recovery.

Chloroform in Puerperal Convulsions. G. S. N. Newman, M. D., Liberty Mills, Va.

I was called to Mrs. M., primipara, æt. 22, Saturday, March 27th, ult., at a distance of 7 miles; arrived 9.45 A. M.; she had been in labor 10 hours. Being entirely ignorant of the nature of the case, I was unprepared for anything involving serious consequences. Everything seemed to be progressing favorably, however, and there was no apprehension of danger. Shortly after my arrival, the waters ruptured; labor progressed; pains were regular. She suffered very much; was restless and uneasy, and expressed great regret that she didn't have chloroform. Her face began to wear an anxious expression. Child continued to advance—pressed upon the perineum—until 10.20 P. M., when she had a most terrific convulsion. Chloroform and forceps were immediately sent for.

11.50 P. M.—Has had six convulsions at intervals of from 15 to 20 minutes. Chloroform and forceps arrived. I allowed her to inhale chloroform, but cautiously, as she was breathing stertorously, and delivered the child, living at 11.55 P. M. Patient seemed to be doing well, except that consciousness had not fully returned. Tried to give morphine on account of some restlessness, but had not succeeded up to 1.10 A. M., when she had the seventh convulsion. Hypodermic syringe was then sent for, and the patient kept under the influence of chloroform, until finally, before the arrival of the syringe, she swallowed a dose of morphine. From this time forward she was fully as well as cases under ordinary circumstances in which no convulsions had occurred.

I have used chloroform in obstetrical practice for 20 years, and have never seen a case of convulsions when it was administered to alleviate the pains of labor.

Cases of Hemlock Poisoning. By G. W. NORMAN, M. D.,* Smiths' Mills, Henderson county, Ky.

Two cases of poisoning by American water hemlock have occurred in my practice.

June 6th, 1874. I was called to see a young man, K., aged 18 years, who was plowing upon the farm of Mr. H., near Smiths' Mills in this county. Upon arriving at the spot in the field, I found him prostrate and violently convulsed, with stertorous breathing, entirely insensible, dilated pupils, pulse 50 to the minute and frothing at the mouth. I obtained from a son of Mr. H. (aged 13 years) who was at work with the young man, the following statement:

He said K. had eaten largely of a root which he had gotten in the field along the border of a ditch, which he called spignet, and that it was good for a bad cold. (H). said he ate also a small root. About an hour after K. had eaten the first he complained of being sick at the stomach, and said he believed that stuff he had eaten was making him sick. He stopped his horse, walked to the fence, took hold of it and made several efforts to vomit, and during his effort to throw up fell over in a convulsion. The boy (H). being frightened, went to the house (about a quarter of a mile distant), told his mother, who sent him for me immediately, and went herself to where the young man was lying.

Mrs. H. stated upon my arrival that the young man had always been healthful, and had never had an attack of the kind before. She said he had had several convulsions before I arrived, at intervals of about ten or fifteen minutes.

Upon learning the facts in the case, I told her it was the hemlock he had eaten. I at once gave him about 30 grains sulphate of zinc, which he swallowed with great difficulty. After a sufficient time, finding no effect from the zinc, I repeated the dose and tickled his fauces with a feather, but could not produce vomiting. He continued in convulsions, which increased in frequency and violence until death closed the scene, which took place about an hour after my arrival.

After death we found a quantity of the root in his pocket, which consisted of several oblong light colored roots, some two

*This report is forwarded to us through the kindness of Dr. J. L. Cook, Henderson, Ky.

and some three inches long, shooting off from the base of the stalk which looks a good deal like the garden parsnip. It bears a white flower and blooms in July.

In the meantime the boy H. complained of being sick and sleepy. I produced emesis in his case; immediately he threw up the root he had eaten. I then gave him epsom salts, purged him freely, and directed him to drink slippery elm mucilage. He was quite stupid for several hours, but after a night's rest was feeling about as well as usual.

Correspondence.

Graves' Mixture in the Delirium of Typhoid Pneumonia and Typhoid Fever.

Mr. Editor,—Pneumonia and catarrhal pneumonias prevailed in this section of our State during the early spring of this year. The *Winchester News*, of March 5th, reports the death of Jas. Hunton, brother of Gen. Eppa Hunton, near Warrenton, Fauquier co., from typhoid pneumonia, after being delirious *over four weeks*.

I beg leave through your valuable journal to call attention to the value of a remedy for the violent and persistent delirium often incident to typhoid fever and typhoid pneumonia, first proposed by Dr. Graves, of Dublin. (*Clinical Lectures*, page 116, edited by Robley Dunglison, M. D., Philadelphia, 1838.) The remedy is a mixture of tartar emetic and tincture of opium, according to the following formula:

℞. Tart. emet..... .....grs. iv.
Tinct. opii.....℥i.
Mist. camph..... ℥viij

M. S.: Dose one tablespoonful every two hours.

On the 20th of last February, I was called to see a case of typhoid pneumonia in a middle aged man of active and athletic constitution, who had been in a state of delirium for twenty-four hours. The usual method of treating such cases was adopted; but the delirium increased to such a degree that it required the strength of four men to hold him in bed; and in his maniacal fury he struggled to get hold of his gun and ax, with which he

threatened to slay all around him. His countenance and gestures rivalled the wildest representations of an American Booth, an English Kean, or an Italian Fuseli upon the theatrical stage. Under these circumstances, I determined to try the effects of Graves' mixture, extemporaneously prepared with water—the camphor mixture not being at hand. Whilst being held by his attendants, by gentle persuasion I succeeded in inducing him to take a spoonful of the mixture every *half* hour instead of every *two* hours. After the *fifth* dose he became nauseated, vomited, and sunk down under the grasp of his attendants into a complete state of syncope, which terminated in a profound sleep for 12 hours, from which he awoke perfectly calm and natural, and rapidly proceeded to perfect recovery.

Many years ago, I witnessed a similar effect of Graves' mixture in a case of violent delirium in typhoid fever.

Yours truly,

JOHN H. BALDWIN, M. D.

Cedar Creek, Frederick Co., Va.

Chorea in the Negro.

Mr. Editor,—In regard to Dr. Mitchell's circular asking for statistics relative to chorea in the negro, I make report of one case, which occurred in a genuine negro girl about eleven years of age. It was remarkable for the acuteness and severity of the attack. I do not think she would have lived a month from the time the disease first made its appearance, but would have died from exhaustion, had she not been relieved. After trying the usual remedies, such as zinc, sulphate, cimicifuga and so on, without any relief, I commenced with the shower bath, using tepid water at first—after a few days, water fresh from the spring. In the absence of a suitable vehicle, the water was poured through a large basket, placed some eight or ten feet above her. She was wiped dry and dressed, this was done every morning. Tinct. ferri muriat. was the only medicine used. These two remedies soon made a perfect cure of her. The disease has never returned, so far as I know.

Yours truly, R. W. I'ANSON.

Bacon's Castle, Surry county, Va., May, 1875.

Damiana.

Mr. Editor,—I noticed in the *Monthly* for May an article on *Damiana*, with a list of cases showing results attending its use. I also observed in the same issue, an editorial notice of this new medicine, which concludes with an invitation for further reports from those who may have used the remedy; and as I have had a fine typical case, I give it to your readers.

Some months ago my attention was called to the properties of Damiana by a medical friend of this city, and having a case soon after wherein the use of a medicine possessing the qualities claimed for Damiana were indicated, I concluded to give it a trial.

Mr. M., æt 55 years, had been a widower five years. Six months ago he became enamored of a young woman, proposed marriage and was accepted, and the day fixed for the wedding. Some weeks since he came to me in great distress, stating that he had been under treatment for sometime for inertia of the genital organs, but without benefit. He stated that he had not had an erection for more than three years, and in view of his approaching marriage to a young woman, was most anxious to restore the animal passions and powers.

I commenced the use of fluid extract of Damiana in tablespoonful doses every four hours. (I will here state that the wedding was postponed for three weeks). After the use of the medicine for some two and one half weeks, he reported that he was in condition to consummate the marriage act. He was duly married, and is now on his wedding tour.

J. W. Van Arnum, M. D.
1529 14th St., N. W.
Washington, D. C.

May 24th, 1875.

Proceedings of Societies.

MEDICAL AND SURGICAL SOCIETY OF BALTIMORE.

[Reported by G. L. Wilkins, M. D.]

Sub-Serous Fibroids of the Uterus.—Dr. D. W. Cathell brought before the Society a colored woman, æt. 45; good muscular and adipose development; has for the past 16 years had enlargement of the abdomen. She first came under treatment about seven years ago; the abdomen was then greatly enlarged. On palpation, the enlargement was found to be lobulated and com-

posed of numerous tumors—probably 15 could be felt with sulci between them. On introducing the finger into the vagina, the tumors could be felt low down in the pelvic cavity. There has been one attack of menorrhagia, but the case has been otherwise unattended by discharge. He was convinced that the tumors are fibroid in character, and not cystic, in consequence of their solidity. They are uterine in their attachments. About 4 months ago, the case was complicated by frequent and recurrent attacks of peritonitis, during which the patient was given up to die. After recovery from the peritonitis, the history of the case was marked by progressive enlargement of the tumors, and menstruation ceased; since then, gradual atrophy of the tumors has taken place. This result is in accordance with the opinion of Dr. Gaillard Thomas, who says, "that having attained a moderate size, they either remain stationary or increase slowly until the menopause, then undergo a certain degree of atrophy, with the cessation of uterine and ovarian functions, until they cease to be a source of annoyance, or at least of danger." The treatment in this case has consisted in the use of tonics, rest, etc. At one time ergot was given, hoping, through its influence on the capillary circulation, to limit the quantity of blood in the tumors, and thereby produce atrophy of them.

Dr. Thos. B. Evans has under his care a similar case. A colored woman of spare build, æt. 40, has, for the past three years, had a gradually-increasing sub-serous uterine fibroid. In May, 1874, she had an attack of peritonitis. There has been from the first more or less disorder of menstruation, generally excessive and painful. In the fall of 1874, menstruation ceased; since then, the tumor has undergone an evident reduction in size, and now occasions comparatively little distress. Her general health is much improved.

Dr. J. J. Caldwell has also met with a very similar case. Prof. Gross and other authorities state that the African race is peculiarly prone to this form of tumor. The cases treated by Byrne, Sims and Emmet have not been followed by as satisfactory results as those ascribed to the experience of Thomas. Dr. Gilman Kimball, of Mass., advocates passing a galvanic current through the tumor. Other authorities propose directly attacking the tumors through the posterior *cul-de-sac* with the galvanocautery.

Fistula Following Pelvic Cellulitis.—Dr. A. B. Arnold was called to a lady who had for a long time been under the treatment of a "womb specialist." Her cervix uteri has been repeatedly cauterized with nitrate of silver, chromic acid, etc. On vaginal examination, the cervix was found to be in a state of

chronic engorgement, evidently due to the injudicious use of caustics. Evidence of an old pelvic cellulitis was found, which, she informed Dr. A., followed an abortion at the fourth month. A movable, fluctuating tumor was felt in the region of the right ovary. With each evacuation of the bowels, large quantities of pus were discharged; on introducing the finger into the rectum, its walls were found coated with matter. In this case, the abscess no doubt had a fistulous connection with the rectum. Taking in connection the abscess, the escape of fluid, the mode of attack, and the history of the case, he *inferred* fistula, but could not determine the exact location of the opening. The mode of healing the fistula is uncertain. We may puncture the tumor; there is no danger of peritonitis or of hemorrhage, and the means of drainage are perfect.

Dr. Hy. R. Noel said this case reminded him of an interesting one that occurred in his obstetrical experience about two years ago. The labor was prolonged, and required instruments; the child was still-born. About three days after delivery, severe metritis, and later, pelvic cellulitis took place, which, after a time, yielded to treatment. Two abscesses now formed and opened—one in the right and the other in the left iliac region. After they had discharged freely, their cavities were injected with the tincture of iodine, and the patient was placed on quinia, iron and nutritious diet; a decided improvement took place in her condition. He was about congratulating himself on the woman's complete recovery, when another abscess formed, having its outlet through the floor of the pelvis, near the anus. This, after considerable discharge healed; but afterwards other abscesses formed and opened into the vagina, on each side, about two inches within the verge. On examination with Sims' speculum, pus was found coursing down the walls of the vagina from the fistulous openings. The discharge was profuse and exhausting. As to its exact origin, he was not prepared to say; but he has passed a catheter through the fistulous openings, and followed the sinuses on each side and back of the uterus. He has resorted to a great variety of expedients to effect a cure, but so far, without avail; has used the sulphide of calcium, which is claimed to arrest all forms of suppurative discharges, but it has proved a signal failure; she has had a course at one of the mineral springs, has taken large quantities of the iodide of potassium, and during the past six months has taken $1\frac{1}{2}$ pounds of the iodide of iron. Her condition is certainly improved, but it seems impossible to close the fistulæ. About one year ago, she contracted the habit of opium-eating, but has been cured of it.

Stricture of the Rectum and Pylorus.—Dr. A. F. Erich is attending a man, æt. 50, who has, for the past 30 years been suffering with obstinate constipation. He has great pain, straining and difficulty in voiding fæces, which are passed in small, narrow, flattened masses. On examination, a dense stricture was readily felt several inches within the rectum. More recently, the case has been attended with troublesome vomiting and a sense of distress in the region of the pyloric orifice. At first Dr. A. was inclined to the diagnosis of cancer, but taking into consideration the long duration of the case, he came to the conclusion that it was one of fibroid stricture of the rectum, and inferentially of the pylorus. The treatment has been mainly directed to the relief of troublesome symptoms, as vomiting, constipation, pain, etc.

Dr. A. B. Arnold remarked that a vast number of the cases of intestinal strictures and obstructions are due to old ulcerations in a cicatrized state. In chronic ulcers, after healing, contraction takes place, and we have the hardened, contracted masses so frequently found in the tract of the intestinal canal. The round ulcers, common to the region of the pylorus, are especially prone to this form of trouble. Their long duration suffices to preclude the diagnosis of cancer. In the way of treatment, but little can be done. When the cicatricial contraction takes place, it indicates that the morbid process is at an end.

Dr. J. S. Lynch thinks Dr. Arnold is right in regard to the frequency of ulcers of the stomach and bowels. It is stated in Niemeyer's *Practice of Medicine* that out of 2,300 dead bodies examined, 1 in every 20 exhibited evidence of cicatrized ulcerations. When it is remembered that Americans are very generally excessive eaters and drinkers, we can look for the same frequency among them.

Dr. Monmonier stated, as to treating stricture of the rectum from cancerous growths, that recently several London surgeons have extirpated the rectum and produced an artificial anus, in some 6 or 8 cases, with comparatively good success.

Cerebral Congestion.—Dr. J. J. Caldwell called attention to a case of neuralgia of the brain, due to venous congestion, and bordering on cerebral hemorrhage. The patient, who is a malarial subject, recently from North Carolina, of full habit and a free liver, is disposed to frequent attacks of intense headache, and they are generally aggravated after eating. For several days preceding a recent attack, he was troubled with wakefulness, an inaptitude for mental exertion, loss of memory, and at times delusions; headache was constantly present, associated with heat and a sense of fulness or distension in the head; the

conjunctiva were suffused, pupils contracted, and there was photophobia; there was also a state of turgescence of the blood vessels about the face and neck. The respiration was slow, loud, and at times apoplectic; pulse slow, hard and full; the bowels were obstinately constipated. Recognizing venous congestion of the brain, and apprehending apoplexy, treatment was, from the first, directed to the diminution of the quantity of blood in the brain—the ordinary measures pursued in the treatment of apoplexy—but failed to produce any improvement. Twelve leeches were now applied to the temples; several hours afterwards, the purgatives took effect, and there was a general mitigation in the symptoms, and ultimate recovery followed. For some time after the attack, there was paralysis of the tongue, showing congestion about the base of the brain and frontal sinuses.

Impotency.—Dr. John Morris has under treatment a case of impotency, in which all of the usual remedies have failed. Man, æt. 35, weight 200 pounds, general health good, and has not been addicted to any imprudences. Has used phosphorus, nux vomica, tincture of cantharides in drachm doses, and electricity. Latterly, he has taken damiana, during the use of which he has had one erection. He has been an inveterate smoker and ale-drinker, but some months ago he stopped these habits. At first, Dr. M. was inclined to attribute these troubles to the cessation of the habits, or the state of depression resulting therefrom, and accordingly directed him to resume the moderate use of both; but this plan has not been followed by any improvement. It has occurred to him that the injection of turpentine might do good.

Dr. Arnold has used galvanism in several cases of impotency with good results; if associated with locomor, ataxy is especially indicated. To be of benefit, its use must be continued for months. In Dr. M's case, he thinks the trouble due to local paralysis, and if he will begin with galvanism, say about 6 to 12 cells, and gradually increase, he may look for recovery.

Dr. Hammond is in the habit of using hypodermic injections of strychnine in similar cases.

Dr. Caldwell remarked, these cases are often due to emotio al excitement—the patient is too eager to accomplish the sexual act. Here it is of paramount importance to inspire confidence, and to calm the undue excitation of the emotions. In using galvanism, the positive pole should be applied to the sacrum, the negative to the penis and the perineum. Each sitting should last about 30 or 40 minutes, and the treatment should be persisted in about four months. A direct current will give tone to the vaso-motor nerves—an inverse current will relax. If the

case is associated with organic disease, he combines this treatment with phosphoric acid and nux vomica.

According to Dr. Erich's experience, a combination of quinia, strychnine, iron and phosphorus has been attended with better results than phosphorus alone. Impotence is often due to malarial influences; then quinia will effect a cure.

RICHMOND ACADEMY OF MEDICINE.

May 20th.—Dr. F. D. Cunningham reported a case of

Shoulder Presentation—Spontaneous Delivery.—The patient was a negro, pregnant with twins. One child had been born at full term with the head presenting; the other fœtus presented by the right shoulder, the hand having been brought down. The doctor left to obtain some chloroform, &c., and was absent about three-quarters of an hour. On his return, the child (still-born) had been delivered spontaneously. The fœtus was of medium size. The midwife said "it came out doubled up." This was the first case of the kind with which he had met.

Eczema.—Dr. W. W. Parker opened the discussion by reporting two cases in young children, both of which were cured by change of diet. In one, the child was weaned; in the other, meat broths were substituted for the bottle, with equal parts of milk and water. He recalled the intimate relationship existing between the skin and the digestive apparatus. Change of diet, air, scenery, &c., by improving the general health, are beneficial in the treatment of eczema. Green, in his work on *Skin Diseases*, recommends blood-letting in certain cases of eczema; but Dr. Parker doubted if any rational physician would adopt that means of treatment at the present day.

Dr. F. B. Watkins thought an unnecessary confusion existed as to the nomenclature and treatment of skin diseases. This arose from giving a special name to every kind of sore. For practical purposes, he thought all skin diseases divisible into (1) those due to parasites, and (2) those arising from all other causes. The first required parasiticides for their treatment; the second required the correction of the secretions, and restoring the general health of the patients.

Dr. Chas. Macgill had seen two cases of eczema in children, in which the eruption, having been "dried up" by the use of a lotion of acetate of lead, against his advice, ulceration of the cornea, with total loss of sight, resulted. His usual treatment for eczema consisted in the local use of the carbolic acid toilet soap, and the internal administration of alteratives, such as iodide of potassium with sarsaparilla, arsenic, cod liver oil, &c.

Dr. J. S. Wellford thought that while simplicity was desirable, skin diseases could not always be successfully treated on mere "general principles." There were some remedies which acted as specifics, such as sulphurous acid in tinea capitis. In some cases of eczema, tar ointment is of great service.

Dr. Hunter McGuire remarked that eczema presented itself in a variety of forms, and also, being due to a variety of causes, required different treatments The eczema of young children is best treated by the local use of benzoated oxide of zinc ointment, and the internal use of arsenic. In certain old cases of the disease, the application of solution of caustic potash effected cures. In old people, good diet, tonics, whiskey toddies, with soothing local applications, together with the occasional bandaging of the affected limbs, was his favorite plan of treatment. In still other cases, benefit resulted from covering the eruption with a solution of caoutchouc. Certain eczemas will not yield to constitutional treatment of any kind. The so called *prickly heat* of fat people in warm weather has a treatment which may be called almost specific. This consists in rubbing on the eruption at bed time the sapo viridis, diluted with cologne—the application to be washed off on the following morning.

Dr. R. T. Coleman does not hesitate to "cure up" eczema in infants, if it be of recent development; but if the system has become habituated to the disease, he regards such a procedure as dangerous, as intimated by Dr. Macgill. Cleanliness, a lotion of acetate of lead and calomel ointment have afforded good results in the treatment of simple, non-specific eczema. In scrofulous eczema, cod liver oil, &c., are indicated, and sometimes, even in this form of the disease, calomel may be of service. For syphilitic and other cases not benefited by other treatment, his routine practice is to give small doses of corrosive sublimate in combination with iodide of potassium, fluid extract of stillingia and syrup of sarsaparilla. The sulphur and tar ointments he employs in appropriate cases.

Dr. F. B. Watkins had cured an eczematous eruption on the back of the hand of a young lady by applying a moistened stick of nitrate of silver after other treatment had failed. He had also successfully treated eczema on the leg of a negro woman by the application of a bandage, saturated in a weak solution of iodine.

Dr. F. D. Cunningham thought the name eczema was too generally applied. True eczema is marked by a dripping exudation, which dries into amber-like crusts, and a glistening skin. There are undoubtedly forms of the disease, each dependent upon the several diatheses, and therefore most rationally and

successfully treated by attacking the constitutional disease, as syphilis, rheumatism, scrofula, &c. But there are other cases, the cause or origin of which cannot be ascertained, and which are most intractable. In one of two cases of this kind under his care, the local application of cod liver oil gave more relief than did any other treatment. In another obstinate case, he noticed a very heavy phosphatic deposit in the urine. He gave blue mass, and afterwards tincture of iron in gtt. xl doses; in a short time, the case was well.

June 3d.—Proceedings altogether of local interest.

June 17th.—Dr. W. W. Parker reported two cases of *threatened cholera infantum*, treated successfully by calomel and bismuth; but the odor of garlick in the breath was marked. There was no symptom of gastric disturbance, though the presence of arsenic in the bismuth was suspected.

Drs. L. S. Joynes, R. T. Coleman, J. N. Upshur and J. Garnett had observed the same odor of breath after using bismuth.

Dr. J. B. McCaw explained the chemical reasons for his belief that the odor was due to sulphuretted hydrogen, and not to arsenic. He remarked that the circumstance pointed out was of frequent observation.

Dr. J. S. Wellford reported through the Committee on Health a case of

Puerperal Eclampsia, which presented some remarkable features. One point was the number of convulsions (26) which occurred from Monday 7 A. M. to Friday 9 P. M., during which period there was one intermission of 12 hours and another of 39 hours without a single paroxysm. The treatment consisted in full venesection, purgation, veratrum viride, induction of labor (by which a living child was delivered) and the free use of chloroform. He ruptured the membranes at 1.30 P. M., two doses of ergot having been previously administered; child born at 2.30 P. M. Norwood's tincture was given in gtt. xx doses every hour, which reduced the frequency of the pulse from 110 at 9 A. M. to 48 at 6 P. M., and it was afterwards held at 70 per minute. The patient took ʒij during the attack; it occasioned no nausea or vomiting, nor any other apparent effect than the reduction in the frequency of the pulse. The pupils were fully dilated except when under the immediate effect of chloroform. The attack was succeeded by puerperal mania, during which there was insomnia of 60 hours' duration, but which yielded to gr. xxx doses of chloral hydrate. Patient and child are both now doing well.

Book Notices, &c.

A Report on the Hygiene of the United States Army, with Description of Military Posts. Washington: Government Printing Office, 1875. Pp. lix—537, quarto-pamphlet.

Under direction of the Surgeon General, Dr. J. S. Billings, Asst. Surgeon, &c., has compiled the report titled as above, and he has done his work in a most faithful manner.

We are glad the day has passed when the only recognized duty of the physician is to "bleed, blister and sweat" his patients. At the present day, he stands on a higher platform. He strives now not only to assuage the pains of disease and to restore health; he does more—he strives to preserve health. We are glad, too, that the advance of Sanitary Science within the past few years has been rapid and conspicuous; so that, at the present day, he who stands as an opponent of efforts made for sanitary purposes, only displays his ignorance of the value of Sanitary Science, or else he exhibits a littleness of spirit and mind that deserve the severest terms of rebuke.

The Report before us has reference to the sanitary condition of the army at the present time; and as such furnishes many valuable suggestions for adoption by citizens. One of the chief points of importance in connection with such a report is that it is systematic. Another important value of this Report is stated incidentally in the following language by Dr. Billings: "Scattered as our army is from Alaska to Florida, its posts give a range of all climates, altitudes and soils, with the hygienic and endemic influences peculiar to each." The lessons of this Report are therefore not of mere local or sectional importance, but are such as should be studied by sanitarians in every State and territory.

In reference to the effect of altitude and a rarified atmosphere upon consumption, we find the following statement, which so exactly represents our views that we give it without comment: "The opinion of the majority of medical officers is that altitude and a rarified atmosphere are not *per se* beneficial in cases of phthisis, but it is the dryness of the air, the exercise, and the out-door life which produce good results in those cases which are 'able to stand it.'"

As a matter af some interest as bearing upon the subject which was so well discussed in our last issue on the *Comparative Mortality of Whites and Blacks*, we note that for the four years

1871–1874, inclusive, the average mortality among the white troops from disease was 10.50 per 1,000, whereas that among the colored troops was 14.25 per 1,000. These statistics are even more unfavorable for the colored troops than those compiled by Dr. Thos. P. Atkinson, from the Army Reports from July 1st, 1863, to June 30, 1865, and published in the Transactions of the Medical Society of Virginia, 1874.

The Report, after stating that "the standard of health and physical perfection of the enlisted men on entering the service is above the average," and that "the mortality from disease among these picked men is distinctly greater than among men of the same age in civil life under the same conditions of climate," proceeds to comment on the subjects related to military sanitation in the following order: 1. Habitations, including barracks, quarters, guard houses, &c. 2. Food and its preparation. 3. Clothing; and 4. Hospitals and medical supplies.

In urging that "means of cleansing the whole body should be as regular a part of the supply of posts as bedsteads," the following trite but forcible statement is made: "A dirty man will, in most cases be a discontented, disagreeable and dissolute man; for the condition of his skin has much more to do with a man's morals than is generally supposed." Not only would it be economy to the government to make the necessary provisions, but it would be to the interest of communities in civil life, if sanitary officers were empowered to order such conveniences in buildings that are to be rented out.

As an effect of over-crowding and bad ventilation of barracks, guard houses, &c., Dr. Billings expresses the opinion that the service loses annually about 100 men. In looking at the table he gives under this head, we find that the mortality per 1,000 whites is 5.39 from consumption; per 1,000 blacks, 5.43 from same cause; from other diseases of the respiratory apparatus, 2,867 whites, and 3,458 colored.

We would call special attention to the remarks under the head of Hospital Construction. The Report recommends the so-called "barrack hospitals"—"that is, temporary wooden structures, intended to last but ten or twelve years—in fact, such as are now used in the army." Many a Southerner will be able to get a just conception of the meaning of "barrack hospitals" by recalling to mind many of the hospital structures around this city during the War of Secession—such as those which composed Chimborazo Hospital, Winder Hospital, Howard's Grove Hospital, &c. We are advised that this kind of hospital was the result of necessity in the South during the war, but were found to be better than more durable buildings for the purpose.

We wish we had the space to enter into something of a review of this special part of the Report. It is of importance to every sanitarian; yet, we can only cordially commend it to the careful study of all interested in the purpose of making further hospital provision for the indigent class of society.

Transactions of the McDowell Medical Society, for the year ending Nov. 4, 1875. Held at Henderson, Ky., May 7th, 1874; Madisonville, Ky., Nov. 4, 1874. Pamphlet, pp. 86.

This is one of the most tastefully gotten-up Transactions, with the exception of some typographical errors, that it has been our pleasure to note. It is the first annual volume of a Society represented by a membership of about 80 regular physicians from Hopkins, Webster, Union, Christian, Henderson, Daviess, Ohio, M'Lean and Hancock counties.

The first paper, on *Phthisis Pulmonalis*, by Dr. J. L. Cook, Henderson, begins by the narration of a case under his care, which had progressed until there was solidification of the lung tissue. Medicines were prescribed with reference to stimulating the nutritive functions, and the patient recovered. The writer insists on the therapeutic value of an early diagnosis, and then states as the two important indications for guidance in the treatment (1) Restoration of the quality of the blood to the normal condition, and (2) removal of local inflammation resulting from the effects of the tuberculous deposits; for which latter purpose he used iodine locally. There is nothing specially new in Dr. Cook's remarks, but they indicate a thorough acquaintance with the latent revision of medical views on the subject.

Dr. Pinckney Thompson, Henderson, reports three cases of *Encephaloid Testes* in the adult—removal of the organs—recurrence of the disease in connection with some of the abdominal viscera, and death. Notwithstanding the fatal termination of each of these cases, the histories show conclusively that the lives were prolonged by the operations; and hence the Doctor very rightly concludes that "it is our duty to remove these tumors."

Under the head of a *Novel Case*, Dr. S. Furman, Henderson, reports that in 1845 he was summoned to a boy who had accidentally swallowed a double sharp-pointed iron arrow spike, which lodged in the stomach. The doctor kept the bowels confined for a week with opium, which also relieved the pain; he also gave aromatic sulphuric acid four times daily. At the end of a week, supposing that the points of the spike had been blunted by the action of the acid, he opened the bowels with

enemata. The boy was never afterwards troubled by the spike, nor was it ever known to be passed, though careful examinations were for a long time made of the stools. The probability is the spike was entirely disintegrated by the action of the acid. During the War of Secession, the patient occupied a conspicuous position in the Southern army.

Dr. J. A. Hodge, Henderson, reports a case of *Gun-shot Wound of the Stomach and Kidneys*, as marked by hæmatemesis and hæmaturia, in which recovery took place within two or three weeks on the opium treatment.

Dr. Benj. Letcher, Henderson, contributes a paper on the *Antiseptic Treatment of Small-pox*—based on six cases—five of which recovered. He is "firmly persuaded that the careful and thorough application of it [carbolic acid] will, in a large majority of cases, prevent secondary fever, that dreaded stage of the disease in which so many patients die." Those who recall Dr. Samson's article in *The Practitioner* (London), will remember that he applies liquid carbolic acid by means of a small camel's hair pencil to each pustule, being careful not to touch the contiguous sound tissue. The effect is said to be magical; the vesicles shrivel; the application smarts, but does not pain. This process is repeated as often as the vesicles fill. Internally sulphite of soda may be used. Carbolic acid should also be sprinkled on the bed clothing, the floor, &c., as circumstances may seem to require.

Dr. J. H. Letcher, Henderson, contributes a 25-page *Memoir of Ephraim McDowell, M. D., of Danville, Ky.* It is a most interesting biography of the Father of Ovariotomy.

Dr. J. D. Collins, Henderson, reports a case of *Longitudinal Cervical Elongation—Operation with Elastic Ligature—Successful.*

Dr. Robert Stuart, Zion, presents a *Report on Public Hygiene*, which is well written, but contains nothing new for the well read student of sanitary science.

Dr. J. W. Thompson, Paducah, contributes a very good essay on *Mercury in the Treatment of Syphilis*, but records nothing more than the experience of every physician, whose judgment is not warped by prejudice, justifies, viz: that mercury properly used is a valuable agent in the treatment of syphilis—if not, indeed, the best of all remedies for what is known as the "secondary stage." It seems hardly necessary, however, that the report should have made so lengthy a verbatim transcript of Mr. J. Hutchinson's views, which are already familiar to medical men the world over.

A Manuel of Diet in Health and Disease. By THOMAS KING CHAMBERS, M. D., OXON, F. R. C. P., London, etc. Philadelphia: Henry C. Lea, 1875. Pp. 310, 8vo. (For sale by West, Johnston & Co., Richmond.)

This is a most valuable book. It should be in the hands not only of every physician, but also in those of the heads of every family. Its technicalities are not so numerous or so uncommon as not to be easily comprehended by every father and mother who possesses an ordinary amount of education and judgment. We have not the space to undertake an analysis of the contents, but we cordially commend it.

We shall content ourselves by a publication of its table of contents, from which the reader may get a fair estimate of the general scope of the work. Part I treats of *General Dietetics*, under which are chapters on the Theories of Dietetics; Choice and Preparation of Food; Digestion; and Nutrition. Part II takes up the *Special Dietetics of Health*—a most important subject, which should be carefully read and remembered. The special chapters of this Part treat of the Regimen of Infancy and Motherhood; Regimen of Childhood and Youth; Commercial Life; Literary and Professional Life; Noxious Trades; Athletic Training; Hints for Healthy Travelers; Effects of Climate; Starvation, Poverty and Fasting; The Decline of Life; and Alcohol. Part III is devoted to the *Dietetics of Sickness*, the special subjects of which Part are Dietetics and Regimen of Acute Fevers; Diet and Regimen of Certain other Inflammatory States; Diet and Regimen of Weak Digestion; Gout and Rheumatism; Gravel, Stone, Albuminuria and Diabetes; Deficient Evacuation; Nerve Disorders; Scrofula, Rickets and Consumption; and Disease of Heart and Arteries. An alphabetical index is appended, the value of which for ready reference will be appreciated.

The Present Status of Electricity in Medicine. Being the semi-annual Address before the Rhode Island Medical Society. By WILLIAM F. HUTCHINSON, A. M., M. D., Providence, 1875. Pamphlet, pp. 29.

In this essay we find the statement: "Of more than 40 cases * * * treated by me for acute dysmenorrhœa during the past winter, not one was unrelieved, and in more than two-thirds of the cases the pain has not returned [after the use of galvanism]. * * * I refer to my friend, Dr. Nichols, of Washington, who has largely used electricity in this derangement, for corroboration of the statement that it is almost a specific therefor."

Six Months Under the Red Cross with the French Army. By Geo. Halsted Boyland, M. D., ex-Chirurgien de' l Armée Française. Cincinnati: Robert Clarke, 1873. Pp. 232.

We have read this unpretending volume with much pleasure. It gives such a minute insight into the arrangement of the medical department of the French army, during the Franco-Prussian war, as we have gained from no other source. In the siege of Metz, we have details, in a plain, straightforward way, of the pent-up army, and the terrible straights to which it was subjected. One fact is prominent, to wit, that the *medical* department of the French army was by no means prepared even for the brief war. There are suggestions that forcibly remind an ex-rebel of late scenes in the South. It does not appear that Dr. Boyland puts forth any reports of cases specially worthy of record. His object was to present a simple narrative of events that came directly under his eye. This he has done in a way to please the laity as well as the profession. The book is got up with taste. We regret, however, to notice some careless proof-reading. S.

Second Annual Report of the Secretary of the State Board of Health of Michigan, for the year ending Sept. 30, 1874. Lansing: 1875. Pp. 218.

This contains able papers on the Entailments of Alcohol, by H. O. Hitchcock, M. D.; Impurities and Adulterations in Table Syrups, by R. C. Kedzie, M. D.; Draining for Health, by H. F. Lyster, M. D.; Poisonous Paper, by R. C. Kedzie, M. D.; Relation of Schools to Health, by Rev. J. S. Goodman; Resuscitation of the Drowned, by R. C. Kedzie, M. D.; Cerebro-Spinal Meningitis, by H. B. Baker, M. D., besides other valuable papers. Dr. Henry B. Baker, Lansing, Mich., Secty., &c.

We have also received from the authors the following reprints from various journals:

Cancroid or Epithelioma of the Lower Lip; Modified Operation for its Removal; Cure. By Middleton Michel, M. D., Charleston, S. C.

Cooper's Dictionary of Practical Surgery, and Encyclopædia of Surgical Science, by Paul F. Eve, M. D., Nashville, Tenn.

Ichthyosis of the Tongue and Uvula, by Robert F. Weir, M. D., New York.

Spasmodic Urethral Stricture, by F. N. Otis, M. D., New York.

Injections of Tincture of Iodine into the Cavity of the Uterus

in Hemorrhage after Delivery, by James D. Trask, M. D., Astoria, New York.

Anæsthesia and Anæsthetics, by J. W. Trader, M. D., Sebalia, Mo.

Pathology and Etiology of Pulmonary Phthisis in Relation to its Prevention and Early Arrest, by E Darwin Hudson, Jr., A. B., M. D., New York.

Analysis of One Thousand Cases of Skin Disease, by L. Duncan Bulkley, A. M., M. D., New York.

Self Injection of the Bladder in the Treatment of the Consequences of Obstructive Enlargement of the Prostate, and the best Means of Accomplishing it; Together with Two Cases Illustrating Another Method of Removing Foreign Bodies from the Urethra, by W. H. Van Buren, A. M., M. D., and E. L. Keyes, A. M., M. D., New York.

A Clinical Contribution to the Treatment of Tubal Pregnancy, by T. Gaillard Thomas, M. D., New York.

Resume of a Report on Position, Pneumatic Pressure and Mechanical Appliance in Uterine Displacements, by Henry Fraser Campbell, A. M., M. D., Atlanta.

Review of the Transactions of the Medical Association of the State of Alabama, by J. B. Gaston, M. D., Montgomery, Ala.

The following Catalogues, Reports, &c., have been received:

Catalogue (vols. i, ii and iv) *of Surgical Instruments*, manufactured by Geo. Tiemann & Co. Fully illustrated, and containing price lists. About 225 pages.

Nose, Throat and Ear Instruments, by Thomas F. Rumbold, M. D., St. Louis.

First Annual Report of the City Physician of Knoxville, East Tennessee, for 1874. A. B. Tadlock, M. D.

Fourteenth Annual Report of the Cincinnati Hospital for 1874. H. M. Jones, Supt.

Second Annual Report of the Board of Health of the City of New Haven [Conn.] for 1874. C. A. Lindsley, M. D., Health Officer.

Twelfth Annual Report of the New York Society for the Relief of the Ruptured and Crippled. May, 1875. Jas. Knight, M. D., New York.

Blue Ridge Springs, Botetourt Co., Va.

Catalogue, &c., University of Virginia, 51st session, 1874–5.

Albany Medical College, 1875–6.

Miami Medical College, 1875–6.

Randolph Macon College, 1874–5 [Ashland, Va].

Medical Department—University of the City of New York.

Pamphlets received, notices of which are crowded out of this issue:

Medical Addresses—I. Nature in Disease. II. Disease—A Part of the Plan of Creation. III My First Question—Its Solution a Sure Basis for Rational Therapeutics. Explanatory Notes. By BENJ. EDDY COTTING, A. M., M. D., Harv., President Massachusetts Medical Society, etc. Boston: David Clapp & Son, 1875. Pp. 123.

Bad Health—Its Physical and Moral Causes in American Women. By JAMES E. REEVE, M. D., Wheeling, W. Va. Read before the American Public Health Association at its Second Annual Meeting in New York City, November 11, 1873. Price 50 cents—Wheeling: 1875.

Relation of Ophthalmology to Practical Medicine. An Introductory to the Summer Course of Lectures of the Jefferson Medical College. Delivered March 29, 1875. By WILLIAM THOMSON, M. D., Lecturer on Ophthalmic and Aural Surgery. Published by the Class.

An Address Delivered before the McDowell Medical Society of Kentucky, Nov. 4, 1874. By WM. T. BRIGGS, M. D., of Nashville, Tenn. 1874.

On the Use of Warm and Hot Water in Surgery. By FRANK H. HAMILTON, M. D., Surgeon to Bellevue Hospital. New York: G. P. Putnam's Sons, 1875—a valuable essay of four pages.

A Valedictory Address to the Medical Graduates of University of Louisville, March 1, 1875. By DAVID W. YANDELL, M. D., Prof. Science and Art of Surgery and Clinical Surgery.

Editorial.

UNIVERSITY OF VIRGINIA—MEDICAL DEPARTMENT.

The semi-centennial commencement exercises of this time-honored institution took place on Thursday, July 1st. The following is a complete list of those upon whom the title of *Doctor of Medicine* was conferred: L. A. Cazenave, Fairfax Co., Va.; J. W. Crenshaw, Ky.; T. A. Cunningham, Danville, Va.; S. S. Davis, Md.; J. W. Dillard, Amherst Co., Va.; A. C. Doggett, Fredericksburg, Va.; W. R. DuBose, Ga.; F. P. Floyd, Tazewell Co., Va.; D. Jefferies, Culpeper Co., Va.; T. O. Jones, W. Va.; A. L. Koiner, Augusta Co., Va.; H. W. Lee, N. C.; W. F. Lockwood, Md.; H. T. Nelson, Charlottesville, Va.; J. H. Peck, Hampton, Va.; E. W. Saunders, Campbell Co., Va.; E. D. Schué, Louisville, Ky.; J. A. Tanner, Lynchburg, Va.; J. W. Vest, Rich-

mond, Va.; W. S. White, Lexington, Va.; and J. F. Winn, Fluvanna Co., Va.

During the session just closed, there were 75 matriculates in the Medical Department. It is a pleasure to note the growing prosperity of this institution, which is an object of pride, not only of Virginians, but of Southerners generally. The thoroughness of its courses of instruction, and the high grade of scholarship, and the carefulness exhibited in awarding diplomas of graduation as far as possible only to the deserving, gives the University a standing second scarcely to any like institution in the country. The Medical Department is conducted upon the didactic principle—with the exception of the schools of Anatomy and Pharmacy, which are abundantly supplied with material for practical lessons.

We are glad to learn that Dr Wm. B. Towles, Demonstrator of Anatomy, proposes, during the summer vacation months, to form a class in Anatomy, and Physiology, for the benefit of those who may wish to perfect their studies in these two fundamental branches. We would be glad to learn that the Doctor's efforts will be appreciated and encouraged.

The next session of the regular course will begin October 1st, 1875. We are informed that all the students of the recent session have been pleased with their past experience, and that quite a number of the under-graduates speak of returning.

Damiana.—Our readers will recall the article on this drug by Dr. Caldwell in our May No. It has attracted the attention of many of our leading exchanges. We were surprised, however, that the *Medical and Surgical Reporter* (May 15th), after making a lengthy extract from the article, should deem it necessary in an editorial note to advise its "readers to be in no hurry to apply for it until we can publish the results of some inquiries we have made of our Mexican correspondents." Though six issues of the *Reporter* have since appeared, we have yet not seen any response from the "correspondents."

But we cannot concede to any journal the right to check scientific investigation, nor the sole proprietorship of scientific inquiry. Recognizing in the results of Dr. Caldwell's experimental uses of the drug the discovery of a frequently needed therapeutic agent, should his observations be confirmed, we suggested the trial of the medicine by readers of the article, and requested reports. If the claims made for damiana be just, let the fact be announced at once; should it prove to be another of the class of cundurango, so far as its efficiency is concerned, let

there be no concealment. The personal interest of a druggist in the matter should be a point of secondary consideration. To ascertain a *fact* was the object of our invitation to record the results of experiments.

To satisfy, however, to some extent, curiosity that has been awakened regarding the value of damiana, we will state that we have learned, indirectly, from a medical officer of the U. S. Army, who had opportunities a year or two ago of learning something of this drug, that it is of frequent use among the natives of the section of country where the plant is said to be indigenous, and that, according to the statements of these natives, the effects claimed by Dr. Caldwell for damiana are not overstated. A private communication from a regular physician of good professional standing of Washington, D. C., also confirms in general the correctness of Dr. Caldwell's estimate of the drug.

Under the head of Correspondence in this issue, and in the report of the proceedings of the Baltimore Medical and Surgical Society will also be found confirmatory experiences. We have, moreover, the promise of a paper on the subject by a distinguished medical writer and professor in Baltimore, whose observations in the main are corroborative of the experience above stated. On the other hand, we have not heard of a single unfavorable experience, though we would be greatly surprised if such does not occur.

We trust that no one will charge us with unfriendliness toward the *Reporter* because of any notice of the error into which the editor of that journal has fallen in his advice. Our object, in view of the facts above mentioned, is to urge investigation by every one able to record the progress of a case under treatment by the drug.

The Board of Medical Examiners for the Third Judicial District of Kentucky met in Henderson about June 1st, and licensed only four applicants to practise medicine; last year fourteen were licensed. We are informed that several young doctors left the neighborhood rather than appear before the Board, and went to Indiana and Illinois to "swing their shingles." It speaks poorly for the colleges which granted diplomas to these gentlemen, if they inspire so little confidence in the proficiency of their graduates as to make them fear the result of an examination as to qualifications. But it cannot be long, under such a regimé, before the State of Kentucky will be rid of its indifferent doctors. Yet, what must soon be the standard of professional attainments in Indiana and Illinois and bordering States, unless they establish similar Boards? Unless such

Boards are legalized in these States, they will become the homes not only of those unqualified graduates who, because of home attachments, would naturally settle in them, but they will become burdened by an overstock of indigent "refugees."

But Virginia has no better protection than the States named. We have, in a former issue, called attention to the effect upon Virginia communities of the Board of Examiners of North Carolina—the results of which Board are properly becoming, day by day, highly appreciated by the citizens of the "old North State." Self-protection, if no other incentive to action can be brought to bear, imperatively demands that Virginia shall not postpone the establishment of a competent Board of Medical Examiners. Opposition to the measure can come only from those who recognize their incompetence. Can it be that ignorance and narrowed down personalities shall interfere with the progress of right?

Correction.

Mr. Editor,—Your report of the discussion in the case which you have entitled "*Puerperal Convulsions and Death*," contains some errors of statement which reflect on me, and which compel me to ask that you will insert this correction.

First, It is stated that I was present at one of the convulsions, and from the connection in which mention is made of it, it rather suggests that the convulsion was aggravated by my treatment. The quotation to which I object is as follows: "Soon after this, Dr. Chas. Macgill arrived. Although in a semi-comatose condition, she was sufficiently aroused when he came in to recognize and speak to him. Dr. Macgill gave her an enema of assafœtida ℥i, which was quickly obtained from a druggist in the neighborhood; he also gave her aromatic spirits of ammonia. In a short time after this was done, another convulsion came on much more violent and of longer duration than the first."

Now, I positively assert that there was no convulsions or anything of the kind after I arrived at the house, but on the other hand, except the brief lucid interval when she called my name, she was in a profound state of coma, which resulted in her death, about one hour after my arrival. Secondly, I affirm that she had no threat of miscarriage, or any uterine disturbance, as I made a careful examination; and Dr. Wellford, after his arrival, called my attention, when inserting the caffeine in the leg, to the positive fact that there was no evidence of any œdema. Her husband corroborates the above.

Yours respectfully, CHAS. MACGILL.

The American Neurological Association held its first session in New York City, June 2, 3 and 4. Dr. S. Weir Mitchell, Philadelphia, was elected President, and Dr. E. C. Sequin, New York, Secretary. By an article of its constitution, the total number of active members cannot exceed 50; the present membership is 35. No one is eligible for active membership unless he has previously submitted a paper on some subject connected with neurological science, which paper shall be referred to the Council for examination and report. The next session is also to convene in New York on the 1st Wednesday in June, 1876. We regret not having space to present our readers with a synopsis of the late proceedings, which were very interesting and profitable.

The Proprietorship of the New Orleans Medical & Surgical Journal has been changed to Messrs. Seymour & Stevens, 96 and 98 Conrman st., New Orleans, La., to whom all business letters should be addressed. Prof. S. M. Bemiss continues in the editorial chair, and sends forth regularly every two months what we regard as one of the best journals published in America. A new volume begins with the July number. Subscription, $5 per annum

The Boston Medical and Surgical Journal for June 17th was largely devoted to historical matters of special professional interest. Among the attractive features were: A Copper-plate portrait of Gen. Joseph Warren, M. D., with quotations from his Medical Day-Book; An Original Sonnet, by Dr. Oliver Wendell Holmes; A paper by Dr. George B. Loring, on the Medical Profession of Massachusetts at the time of the Revolution; One by Dr. J. M. Toner, Washington, D. C., on the Medical Department of the Continental Army; Translation of a Hessian Surgeon's notes of some of his American experiences; Reminiscences of a Tory Surgeon's part in the Battle of Bunker Hill; A Letter from Charleston, S. C., upon historical subjects. Price 15 cents. Persons wishing copies of this remarkably attractive and valuable number should apply to the publishers, H. O. Houghton & Co., Boston.

The Medical Chart, issued by the Case-Record Company, Cincinnati, Ohio, for the more ready record of cases, should be in the hands of every busy practitioner who preserves notes of his cases. By having them in one's possession, there is less liability on the part of the physician to forget to note every important condition and change. The *charts* are printed on good

ruled paper about the size of large half-page fools-cap, with margin sufficient for binding, if desired. On one side of the sheet are well laid off blanks for the record of temperature, pulse and respiration; and the printed diagrams (4 figures) of the regions of the body are well arranged to indicate by pencil mark the location of disease or symptom. On the opposite side of the sheet are printed blanks for the name of patient, disease, age, sex, weight, race, occupation, married or not, physique, residence, family history, and history and record of the case. Price 5 cents a sheet; 50 cents per dozen sheets; $3.00 per 100. It will pay to patronize this enterprise. Send for a dozen and try them.

Dr. M. Gonzalez Echeverria, the originator of the Epileptic and Paralytic Hospital, Blackwell's Island, N. Y., and well known as the author of an excellent work on epilepsy, is about to publish another work in London on Epilepsy—Its Medical and Legal Aspects. The work will be thoroughly practical, whilst the eminent position of the author will entitle every suggestion to consideration.

The Horace Wells' Monument, in process of erection in Hartford, Conn., in memory of the accredited discoverer of anæsthesia, will cost considerably over $10,000. The State of Connecticut and the city of Hartford have each subscribed $5,000. A circular has been issued by the Hartford Medical Society asking for further pecuniary aid. Any amount that parties may feel able to contribute should be forwarded to Dr. G. W. Russell, Hartford, Conn.

The Prize of $100 offered by Dr. S. D. Seelye, Montgomery, Ala., for the best essay on *Bright's Disease* considered worthy of a prize, is open to competition from any section of the country. It is offered in view of the increasing frequency of the disease in Alabama. The merits of the essay are to be adjudicated by a committee of five of the Alabama Medical Association, of which Dr. Jerome Cochran, Mobile, is chairman, to whom all essays are to be forwarded by February 1st, 1876.

Public Health Magazine is the title of a new journal of 32 pages monthly, devoted to hygiene and public health, published in Montreal, Canada, edited by Geo. A. Baynes, M. D. Price, $2 *per annum*. The first number (July, 1875) is received, and its contents speak well. We hope that this, as all similar enterprises, will meet with an abundant success, and do the good designed.

MORTUARY STATISTICS OF SOUTHERN CITIES FOR MAY, 1875.

LYNCHBURG.—No epidemic. Certificates were given by the Board of Health to the 18 marked "unknown."

MOBILE.—Vigorous measures have been enforced to put the city in as good sanitary condition as possible, in view of the approach of the Yellow Fever season. The city is healthy at present.

(Compiled from Reports of the several City Boards of Health.)

Cities	RICHMOND, VA.				NORFOLK, VA.				LYNCHBG, VA.				MOBILE, ALA.				SELMA, ALA.				ATLANTA, GA.			
Health Officers, ... Doctors	J. G. Cabell.				Wm. M. Wilson.				R. S. Payne.				W. D. Bizzell.				John P. Furniss.				E. L. Connally.			
Population	Census Feb., 1874, though estimated at 65,000.				Estimated.				Estimated.				Census 1870. In addition 1,200 Creoles are estimated				Estimated.				Census 1873, tho' estimate is 35,000.			
	White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
	33,452		27,213		13,500		9,000		7,000		7,000		18,115		13,919		3,500		4 000		18,526		11,607	
Sex	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M	F.	M.	F.
Number of deaths	19	28	36	30	6	10	11	12	1	2	11	17	12	22	20	23	3	2	3	0	12	8	7	16
Number still-born in addition	7		8		1		4		2		5		1		4		2		0		0		4	
Ages. Ages unknown not calculated. Under 1 year	14		19		Color not given.		9		1		9		10		11		1		1		6		4	
" 3 years	5		7				4		....		3		..		4		...		2		1		6	
" 10 "	4		3				4		...		4		2		5		....		....		...		2	
" 20 "	...		4				3		...		1		...		2		....		...		2		3	
" 30 "	6		5				5		1		3		7		2		...		...		2		2	
" 40 "	4		6				2		1		2		1		4		1		1		2		2	
" 50 "	3		2				2		...		2		4		4		...		1		2		2	
" 60 "	2		5				5		...		1		3		2		...		...		2		...	
" 70 "	7		8				3		...		1		2		3		1		...		2		1	
" 80 "	2		4				1		...		...		...		3		....		...		1		1	
" 90 "	...		...				1		...		...		...		...		...		...		...		...	
" 100 "	...		1				...		...		2		1		...		...		...		...		...	
Over 100 "	...		2				...		...		....		....		...		...		...		...		...	

CAUSES OF DEATH.

Abscess of liver, of kidney	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Accidents, Suicides, Wounds, &c.	2	.....	1	.....	.....	.....	3	.....	.....	1	2	1
Aneurism	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Aphthæ	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Ascites, Dropsy, &c.	1	2	.....	.....	.....	1	.....	1	.....	.....	1	1
Birth, Premature	1	3	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Brain Softening, Apoplexy, &c.	1	1	.....	.....	.....	.....	1	2	.....	.....	2	1
Bright's Disease	1	1	.....	1	.....	.....	1	2	.....	.....	.....	.....
Bronchitis	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....
Cancer	1	.....	1	.....	.....	.....	2	.....	.....	.....	.....	1
Cholera Infantum	2	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....
Congestion Bowels, Brain, Lungs, &c.	.....	.....	1	.....	.....	.....	3	.....	.....	.....	1	.....
Consumption	5	10	2	5	.....	2	3	9	.....	.....	4	4
Convulsions	1	3	.....	5	.....	.....	.....	1	.....	.....	.....	.....
Croup—Pseudo-Memb.	1	.....	.....	.....	.....	1	.....	.....	1	.....	.....	.....
Cystitis	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diarrhœa & Dysentery	2	1	.....	.....	.....	.....	2	1	1	.....	.....	1
Diphtheria	.....	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....
Enteritis	1	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Epilepsy	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fever—Intermittent	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
" Puerperal	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
" Remittent	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
" Typhoid	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Gastritis	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Heart Disease	.....	5	.....	.....	1	1	1	1	.....	.....	1	2
Hemoptysis	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Hernia, Intussusception, &c.	.....	1	.....	.....	.....	.....	1	1	.....	.....	.....	.....
Hydrocephalus—Acute	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Inanition, Old Age, &c.	2	9	1	3	.....	.....	1	2	.....	.....	.....	1
Infanticide	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Meningitis	5	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
" Cereb. Spinal	.....	1	.....	.....	1	.....	5	.....	.....	.....	1	.....
Metritis	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Paralysis	1	1	.....	1	.....	1	.....	.....	.....	1	2	1
Peritonitis	.....	.....	1	1	.....	.....	.....	1	.....	.....	.....	.....
Pneumonia	4	6	1	1	.....	.....	1	3	1	.....	.....	1
Pyæmia	.....	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Rheumatism	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....
Scarlatina	1	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scrofula, &c.	1	1	.....	.....	.....	.....	.....	1	.....	.....	1	1
Small-pox	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....
Syphilis—Congenital	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Teething	.....	2	.....	.....	.....	.....	.....	1	.....	.....	.....	4
Tetanus	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Thrush	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Trismus Nascentium	1	.....	.....	.....	.....	1	.....	4	.....	.....	.....	.....
Unknown or Ill-Defined	3	11	1	.....	.....	18	.....	1	.....	.....	4	3
Whooping Cough	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....

Prof. John T. Darby, M. D., formerly of South Carolina, has been elected Professor of Surgery, &c., in place of Prof. A. C. Post, M. D., resigned, in the University of the City of New York. No better selection could have been made, as Professor Darby has a reputation common to the country, and is withal a most popular gentlemen.

Dr. T. S. Powell, editor of the *Southern Medical Record*, paid us the compliment of a call on June 24. He delivered the address to the graduating class of one of the Petersburg female colleges. Dr. Powell is a Virginian by birth and in early education, and while visiting his native State was cordially welcomed by a host of acquaintances and friends.

Dr. E. J. Kirkscey, formerly of Columbus, Ga., but for some time a resident of Louisville, Ky., has been honored with the offer of a Surgeon's commission in the army of the Khedive, which he accepts, and will leave for Egypt during July.—*Am. Med. Weekly*, June 29th, 1875.

The Great Pressure upon our Columns has caused us again to use small type in some portions of this issue, to unlead other portions of reading matter, and to add four pages, making this number an 80-page journal, instead of 76; and yet some very valuable contributions have to lie over until the August No.

The Excessive Heat of the last few days of June was chronicled in our cities by a sudden increase in the number of deaths from cholera infantum.

The Delay in Appearance of this Number has been due to causes beyond our control.

A Hater of Tobacco asked an old negro woman, the fumes of whose pipe were annoying to him, if she thought she was a Christian. "Yes, brudder, I spect I is." "Do you believe in the Bible?" "Yes, brudder." "Do you know that the Scriptures declare that nothing unclean shall inherit the kingdom of Heaven?" "Yes, I've heard of it." "Well, Chloe, you smoke, and you cannot enter the kingdom of Heaven, because there is nothing so unclean as the breath of the smoker. What do you say to that?" "Why, I spects I leave my breff behind when I go dar."

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Original Communications.

ART. I.—*What Course should be Pursued with an Eye Lost through an Accident?* By JULIAN J. CHISOLM, M. D., Professor of Eye and Ear Surgery in the University of Maryland; Surgeon in Charge of the Baltimore Eye and Ear Institute.

Having had occasion in the last two weeks to remove ten eyes lost through accident, all of which were giving trouble, both in the lost eye and in the good one—some of them after a few weeks, others after many years loss—I have thought that the views elicited by ophthalmic study would be conducive of good to the profession at large. So seldom is an injured and lost eye carried through life without sooner or later giving trouble, that one of the most important axioms established by modern ophthalmic surgery is to regard every such lost eye as a thorn, which will at some time cause irritation, both in the eye lost, and, through sympathy, in the good eye, and will eventually destroy the good eye also, through repeated attacks of inflammation. These inflammatory processes prove rebellious to every kind of medication, and will surely recur and run their destructive race, unless the only controlling means be used, viz: the extirpation of the lost and injured eye from which the danger to the good eye came.

This axiom, that every lost eye from injury should be taken out, has no qualification, and is absolute. By this I mean to say, that no surgeon will ever do wrong who removes an eye lost through injury, whether at the time of operation the eye gives trouble or not. Whenever it is taken out a lurking, dangerous enemy is gotten rid of.

A lost eye from accident is usually a deformed one, marred in its fair proportions by shrinkage, or made conspicuous by the milky whiteness of its opaque lens, or exhibits a scarred surface and discolored iris, indicating the character of the injury which had destroyed the sight. Such unsightly eyes, from which the perception of light has forever departed, often flush up under the slightest exposure, and remain both a deformity and an ever-threatening source of trouble.

The period at which inflammation makes its appearance in a lost eye is by no means fixed. The accident always causes a certain degree of inflammation, with more or less impaired vision. Often there is complete destruction of sight from the very reception of the injury. After some weeks the pain and redness may altogether pass away, leaving the eye with defective, or even lost vision, and with more or less disfigurement, but otherwise giving no discomfort. This quiescent stage may be of very variable duration. In the course of time—possibly in a few weeks after the accident, or it may be a few months, or, in rare cases, after many years—the lost eye becomes sensitive and the sympathetic trouble in the good eye begins. Recently I have had occasion to remove an eye which was threatening the good one after thirty years' of latency.

When this pain comes on, the patient imagines that he has caught a cold in the lost eye. A few days later the good eye is complained of as being weak; strong light annoys, and reading for even a few minutes causes fatigue. The so-called cold in the eye may pass away, releasing the good eye from sympathetic irritation. The lost eye, however, remains sensitive to the touch, with a lingering blush of congestion. This redness, from the tardiness of its withdrawal, seems disposed to make a more or less protracted stay.

After an uncertain interval another cold is caught in the lost eye, followed by the same peculiar sympathetic irritation in the good one, but with more pain and redness than on the previous occasion; also with some dimness of vision. Relief may be again experienced, and all inflammatory troubles subside both from the lost eye and from the good one. The sight in the good eye is, however, not so sharp as formerly, and a careful

inspection will reveal an irregularly contracted pupil. This shows that the sympathetic inflammation has invaded the tissues of the iris, and the glutinous inflammatory deposits have stuck the iris to the capsule of the lens. Sooner or later another attack comes on. This time the good eye sympathizes to a greater degree, the pain and inflammation extending beyond the iris to the choroidal structure—a serious complication for vision. When the inflammation again subsides, as it had so often done before, it leaves the former good eye a nearly useless organ. It retains only a perception of light, but is bereft of all useful vision. The end of the trouble is not even yet reached, for with loss of sight there is no immunity from suffering. On the contrary, attacks of inflammation, in greater or less severity, continue to harrass the patient, until he begs to have both eyes taken out, the only means of protection from suffering. One of the most grateful patients that I have ever had was one to whom I gave immunity from frightful suffering by taking out both eyes. His relief was prompt and permanent, and he has never ceased to express the greatest gratitude.

If, in cases of loss of an eye by accident, the inflammatory attacks would restrict themselves to the lost organ, the useless and painful eye might be soothed by treatment, and, barring the temporary distress, would not require instrumental interference. It is on account of the intimate sympathetic connections between the two eyes that the inflammatory irritation in the one is so surely transmitted to the other, to its injury or complete destruction, depending upon the readiness with which the trouble is detected and the promptness with which the only remedy is applied, viz: the removal of the injured eyeball; any other treatment is temporizing, and will prove itself ineffectual in establishing any permanent good.

The peculiar kind of irritation which excites these metastatic destructive processes seems to reside in the ciliary nerves. In all cases when the lost eye is removed, and cut into, the chief inflammatory changes are found centred in the ciliary region. In acute and recent cases extensive lymph deposits cover the ciliary processes, and both aqueous and vitreous chambers may contain more or less pus. In the very old cases, where the eye is shrunken, bony plates are found in and without the choroid.

These hard structures, by pressure upon the ciliary nerves as they pass forwards from the back of the eyeball, may be the immediate cause of irritation.

All wounds of the eyeball are not equally dangerous in causing sympathetic inflammation. Wounds strictly within the limits of the cornea may let out all of the aqueous humor; and if the lips of the wound gape, may even permit a portion of the iris to protrude through the cut, as a large iritic hernia. Should this protrusion remain, nature will in time remove it or convert the protruding iritic substance into cicatricial tissue. The inner portions of the iris sticks firmly to the inner face of the cornea, shutting up the pupil and shutting out vision. Patients suffering from such an accident are not likely to have sympathetic inflammations, although the eye has temporarily lost its usefulness. The operation for artificial pupil will restore sight and enable the individual to retain a useful organ. When the entire protruding portion of the iris is trimmed off with scissors, at the time of the accident, and an atropia solution is dropped into the injured eye, a good, although an irregular pupil, is preserved. Strictly corneal wounds are, therefore, not the most dangerous wounds to the eye; otherwise our many cases of cataract extraction, where the opaque lens is removed through an extensive cut in the cornea, would be followed by sympathetic troubles in the other eye, which is not the case.

The very dangerous eye-wounds are lacerations through the ciliary region. The extent of the wound divides the cornea and the sclerotic tissues, cutting through the junction of these and injuring the deeper parts which lie in this locality. From such a wound an eye seldom escapes permanent injury and future trouble. When a wound is received through this peculiarly sensitive portion of the eye—especially if the sight be seriously impaired from the moment of the accident—the tediousness of the inflammation which follows, the great suffering, and the nearly certainty of sympathetic trouble in the course of time, warrants the prompt removal of the injured eye as the proper course of treatment. It is always best to remove the lost eye before the good one has become in any way affected. Should an active sympathetic irritation be excited, before this precaution has been taken, there is no surety that the good eye will not be more

or less permanently injured by the inflammatory process. Sometimes the attack in the good eye does not yield at the moment the injured eye is removed, and in some rare cases, the destructive process, once commenced, will go on in the good eye, notwithstanding the extirpation of the lost one.

I have often seen patients with dangerous wounds of the eye experience such protracted suffering as to incapacitate them from all work for months after the accident. In such cases, if the eyeball be extirpated relief comes so promptly and decidedly that the patient is ready to resume his regular employment in a few days. To the laboring man, a correct diagnosis and a speedily executed operation, based upon the fore-knowledge of what is to be expected should an antiphlogistic course be alone pursued, will save the mechanic many weeks of suffering, and possibly protect his family from want. Should a foreign body inflict the injury and remain imbedded in the eyeball, the necessity for immediate removal of the eye becomes even more imperative, as the presence of the foreign body (usually a piece of metal) makes the future suffering more certain.

When an injured and lost eye has been removed, the operation gives perfect protection to the good eye, which has not yet experienced any serious inflammatory attacks. Until the injured and lost eye has been removed there is no positive safety for the remaining one.

To the uninitiated the extirpation of an eye seems but one step removed from the sacrifice of life. The operation is looked upon not only with horror, but is considered a most fearful one. To those familiar with the facility with which an eyeball can be removed, the little blood lost (not a teaspoonful), the absence of danger, and the immediate relief which it brings, the operation is justly considered the most successful, as well as one of the most brilliant, in surgery.

The present method of removal consists in cutting the conjunctiva all around the very edge of the cornea; through this circular incision a blunt hook is introduced, the tendons of the recti muscles hooked up and, with a sharp scissors, are cut through at their line of attachment to the sclerotic coat. As some of these muscles are much more developed than others, it is more convenient to divide them in the following order: first,

the internal rectus; then the upper; then the external; and lastly, the lower one. It is well to leave a small ledge of tendon from the internal rectus attached to the sclerotic, for convenience of holding the eye and facilitating the more ready exposure of the optic nerve. When all of these muscles have been carefully divided, the remnant of the internal rectus tendon is seized with a forceps, and the eyeball rotated forcibly outward, which brings the optic nerve entrance into the sclerotic, near the surface at the inner corner of the eye. A curved scissors is introduced into the conjunctival incision from this inner canthus, and pushing it backwards it glides behind the eyeball, catching the optic nerve between the blades. The nerve is severed, and the scissors, used as a lever, lifts the eyeball out between the lids, all the structures having been divided which had kept it firmly held in the socket. Now clip the tendons of the two oblique muscles at their points of attachment to the back of the eyeball, and the eye comes away in its sclerotic coat alone. In the socket remain for future use all of the muscles and all of the conjunctiva. The elasticity of the conjunctiva effaces nearly the entire wound in a few hours, leaving only a very small central exposed raw surface of about one-fourth of the size of a finger nail to close by cicatrization. As this wound is too small to enable us to see the divided vessels for ligation or torsion, a sponge thrust into the socket between the lids and firmly bandaged in position for the space of an hour will prevent any oozing of blood. When the surface has lost its soreness, an artificial eye can be easily adjusted, which the retained muscles will move in similar directions to the good eye by acting upon the cicatrix in the conjunctiva. By extirpating a deformed, lost and painful eye, not only is perfect protection against future trouble secured, but good looks are also regained, and one escapes many annoying expressions of sympathy.

The operation for the removal of an eye should always be performed under the full influence of an anæsthetic, so that the patient experiences no pain whatever. I have used chloroform since its discovery (now twenty-five years). I administer it certainly once every week, and often several times a day. During these twenty-five years experience as a surgeon I have never had an accident from its use. As to the dangers of removing

an eye lost from accident, I would state that I extirpate, on an average, about one for every week of the year, and I have never had any trouble from the operation. As to the speedy relief which follows, within twelve hours, the nauseating effects of the anæsthetic having altogether passed off, the patient, freed from pain, is ready to leave his room and take outdoor exercise, often starting upon a long journey the day after the operation.

The following, one of the ten cases referred to as having been extirpated in the last fortnight, will give a good insight into the progress of a case of enucleation:

F. G., aged 62, came to the Baltimore Eye and Ear Institute from his country home, two hundred miles distant. He had lost his eye three years since. For the past six weeks he has been suffering intense pain in the lost eye, which has kept him from writing, and which has recently made the good eye weak and dim. I found the eye in a state of acute inflammation, with the cornea in a sloughy state, and the anterior chamber apparently full of pus. He was anxious for relief, and walked the room restlessly on account of his severe suffering. Chloroform was administered, prefaced, as I invariably do, with a drink of whiskey. The patient quietly went to sleep after inhaling chloroform for only a few minutes. The eye was enucleated in accordance with the method already described, and the patient put to bed. Four hours after the operation, I found the patient free of all pain and feeling so well that he desired to accompany a friend who had some business in a distant portion of the city. He had experienced no nausea from the anæsthetic. Eight hours after the operation, he was enjoying such perfect relief that he took cars to return to his home.

The rule laid down for the treatment of eyes lost by accident is equally applicable to eyes lost by acute diseases—especially extensive corneal ulcerations, projecting staphylomas, and internal acute inflammations attacking the choroid and iritic tissues. In fact, the rule is a good one, even when generalized, so as to cover every lost eye that has been marred in its appearance by the destroying cause, whatever that cause be. In every such case the safest course to pursue is to remove the lost eye.

ART. II.—*The Interdental Splint in Fractures of the Maxillary Bones.* By L. G. NOEL, M. D., D. D. S. (Read before the Nashville Medical Society, May 4, 1875.) Nashville, Tenn.

In fractures of the superior maxillæ, there is seldom any con

siderable amount of displacement, and in but few cases will it be found necessary to resort to surgical appliances to overcome deformity. This will, however, depend entirely upon the nature and amount of force to be applied. Cases are recorded in which all of the bones of the face have been broken up from their attachments, so as to make the physiognomy present rather the appearance of a bag of bones than that divine thing of which poets are wont to sing; nor has this amount of injury proven too much for the recuperative powers of nature.

It is in the treatment of fractures of the lower jaw that the skill of the surgeon is most severely taxed, and in which the interdental splint is most frequently called into requisition; but in all cases where the teeth are displaced in either jaw, it will be found applicable, and most desirable. It is, then, of fractures of the lower jaw that we have more particularly to speak, and, as we shall presently see, there are few cases that are not amenable to treatment by this method.

On account of the extreme mobility of the temporo-maxillary articulation, fractures at the neck of the bone are comparatively rare, though this is probably its weakest point. The comparative immunity of the ramus may be accounted for in part by the slipping of the articulation when force is applied to this part of the bone, in part by its great strength from the angle up to its bifurcation into the coronoid and condyloid processes. The alveolar part of the bone is weakened by the dental canal, and by the alveoli; hence the frequency of its fracture. The great prominence of the lower jaw, its subcutaneousness, and the solidity which it opposes to force by the articulation of the teeth, all tend to render it more vulnerable to injury. Then there is another reason for the frequent fracture of the alveolar portion which appears to my mind, and of which I have never seen any mention by writers upon this subject, viz: the roots of the teeth may act as levers tending to rend the bone asunder, when the lower jaw is driven forcibly against the upper. Hamilton records 24 cases of fracture of the lower jaw, in which one was perpendicular through the symphysis, twelve through the body, and five through the angle. Of the 24, eleven were of a double or triple nature, and nearly all were oblique in direction.

A look through the standard works on surgery will convince

any one that surgeons have trusted almost entirely to nature in the treatment of these fractures, for they have relied almost wholly upon universal splints, which amounts to about the same thing. Indeed, the overweening confidence which the writers upon this subject seem to place in bandages and external splints of binder's board, leather, and such flimsy appliances, would lead any one to suppose that they entirely overlook the necessity of a correct articulation of the teeth to beauty of feature as well as to the performance of mastication.

Dr. Norman W. Kingsley,* in writing upon this subject, tersely remarks :

"It is impossible to make splints of universal application ; all efforts in that direction have proven comparative failures. Every case of a complicated character must have a splint made especially for it, and the making and adapting can be done by none other so well as by the dentist. The treatment of such cases makes the bond between dentistry and general surgery very strong. It has been a favorite idea with some professors of surgery that the general surgeon's skill should be equal to any and every emergency ; hence, a treatment of universal application has been fostered, and the aid of specialists discouraged. But surgery gains no laurels by such efforts at independence, and in many instances the patient suffers by the want of the highest attainable skill."

Let us reflect a moment upon the various muscles attached to the lower jaw whose action will tend to displace its fragments when the bone is broken. We have acting upon the symphysis portion a powerful set of muscles, whose action is to depress the jaw toward the hyoid bone, to which most of them are attached. These are the geniohyoid, hyoglossus and digastric muscles. The long roots of the cuspid teeth cut the bone to such a depth at their insertion as to render it very liable to yield at this point, on either side, to force received upon the chin ; hence, we often have the whole symphisis portion forced and dragged downward and backward by the muscles just named. Between the cuspid teeth and ramus we have the mylo-hyoideus, arising from the mylo-hyoid ridge, and passing downward and inward to be inserted in the hyoid bone. Its action will be to pull the fragment of bone to which it is attached inward. Where all this

Johnston's Dental Miscellany, January, 1874.

portion of the bone between the cuspid teeth and ramus is free, it will be pulled inward by the mylo-hyoideus, upward by the masseter, and forward by the internal pterygoid. The masseter occasions little displacement when the fracture occurs at the point of its insertion. If the lesion be at the neck of the bone, the body will be dragged forward by the internal pterygoid, and upward by the temporal and masseter.

Where the teeth are present, the interdental splint offers the best means of overcoming the action of these muscles known to the surgeon. We place before you a splint constructed after Dr. Kingsley's method, and described by him in *Johnston's Dental Miscellany*, Jan., 1871. You will observe that it is a vulcanite cap, made to fit perfectly over the crowns of the lower teeth, with slight indentations in its upper surface to receive the upper teeth. Attached opposite the cuspid teeth, on either side, is an arm of steel, which curves back, outside the mouth, in the direction of the ear. To these arms, a strong band of the elastic rubber, known as stationer's rubber, is attached, and passing under the chin, in the manner of a boy's hat string, makes an elastic sling, tending to drive the teeth up into their respective caps. It is best to place a pad between this band and the chin.

In taking impressions for such splints, plaster of Paris will be found the most suitable substance, as it requires no force to adapt it to the parts—a consideration of some importance in handling sore and injured parts. It copies well, breaking readily away from undercuts, instead of dragging out of place, as wax and gutta percha.

Are we to endeavor to hold the fragments of the bone in situ until an impression is secured? Such displacement as may be readily overcome may be reduced, but further than this no trouble need be taken, for all our efforts to hold the fragments together are likely to result in failure. The setting of the bone is to be done in the plaster model. An impression is to be secured of both jaws, and casts made therefrom, when, upon turning the grinding surfaces of the teeth of the two casts together, as in the occlusion of the jaws, the exact amount of displacement will be shown.

We obtain our casts, then, regardless of displacement, and by making sections through the plaster at the points of fracture we

adapt the teeth to their antagonists, and seal the cast together again, when it is ready for moulding the splint. Speaking of this point, Dr. Kingsley observes:

"Just here lies the key to success. In all cases where there are one or more teeth on each side of the mouth, articulating with those of the opposite jaw, it will be almost impossible to make a mistake, if care is exercised; and yet, if any discrepancy occur, it will be fatal to the success of the appliance."

The splint is to be made upon the re-adjusted model, in wax or guttapercha, the arms arranged and the apparatus removed from the model and tried in the mouth, when any change may be made that is deemed necessary before vulcanizing. When satisfactorily arranged, it may be placed in the flask, and the wax or guttapercha replaced in vulcanite. The arms should be made of strong steel wire, capable of withstanding considerable force without bending.

The great advantage which this splint has over those of Drs. Gunning and Bean, is in its simplicity and the ease with which the patient may be fed when it is in place. It will even admit of some speech, where the injury is not too great. Every mechanic has in his mind a conception of his work that, to him, at least, is perfection, before he begins to execute it; but such is the poverty of human skill, as compared with human conception, that seldom does he realize the ideal which he sets out to make. Thus it is with the surgeon. His idea of perfection in the treatment of fractures is to bring the broken ends together, notch to notch, and to retain them until nature heals the breach; but such is the obstinacy of muscular resistance that he seldom attains to his idea of perfection.

In the treatment of fractures of the maxillæ, however, we fear that surgeons generally have been too easily satisfied. We fear that most of them are satisfied with any result that is devoid of external deformity. In many cases in which this much has been obtained, if we direct our attention to the articulation of the teeth, we will find their adaptation to each other so destroyed as to greatly cripple the patient for mastication.

Nor is this the only evil that will result from maladaptation of the teeth, though it would seem sufficient. The perfect enunciation of words in speech, and the harmony of the voice, is

greatly impaired. The possibility of a failure to secure these ends, where the splint is constructed after the manner above described, is rendered almost nugatory. Where so much can be accomplished by it in contributing to the welfare of the patient, to his personal appearance and bodily comfort, should the surgeon withhold it because of its expense?

ART. III.—*The Character of the Pulse Premonitory of Post Partum Hemorrhage.* By HARVEY BLACK, M. D., ex-President Medical Society of Virginia, etc., Blacksburg, Va.

June 10*th*, 1875. At 12.15 A. M., I was called to see Mrs. G. J., aged 23, the mother of four children, in good health of robust appearance Found her in active and natural labor, and in three-quarters of an hour she gave birth to a fine, healthy child. By the aid of moderate pressure upon the abdomen and slight tension of the cord, the after-birth was delivered in five or six minutes. Upon examination, no clots were found remaining in the vagina or os uteri. After the time consumed in disposing of the after-birth and washing my hands, I applied my hand over the womb, and found it apparently well contracted. The pulse, which, before the delivery, was undisturbed, was frequent and irritable—beating from 100 to 110 per minute. In every other respect she seemed to be doing well. In about twenty minutes she asked for the camphor bottle and said she felt faint. With the utmost promptness I applied one hand over the uterus, and with the other removed a large quantity of clots from it and the vagina. The womb contracted quickly and firmly. I gave a dose of ergot, and at short intervals, two doses of spirits of ammonia; also applied cold cloths to the abdomen for ten or fifteen minutes. For about fifteen minutes she was without pulse at the wrist, very pale, and sick at the stomach, but not entirely unconscious. Reaction then began, and in an hour was fully established. She slept some, and I left her at 6 o'clock doing well.

June 12, 1875.—2 P. M., was called to see Mrs. N. S., aged 43, the mother of four children, and a strong, hearty woman. Found her in labor, which terminated without difficulty in one hour and a-quarter, in the birth of a large, healthy child. The after-birth came down in four or five minutes without aid, and was removed. No clots found remaining in vagina or os uteri, and womb well contracted. Pulse, 10 minutes after delivery, 80, soft and full. Remained until 5 o'clock, and left her doing well.

We have here presented two cases as nearly alike as to the circumstances of their delivery as could well be found, both going through the stages of natural labor without difficulty or exhaustion, and both giving promise of the best results until 20 minutes after delivery, when we find one almost moribund, the other with no symptoms to cause anxiety. The only difference that marked the course of the cases thus far was the quality of the pulse, and unless this was a precursor of the hemorrhage, there was no symptom present by which to foretell its occurrence. In the one the pulse was frequent and irritable, or, perhaps, better described as frequent and fretful; in the other, slow, soft and full. The former, when once discovered, will be readily recognized, and, in my humble opinion, should be regarded as almost a sure precursor of a hemorrhage, to occur in a few minutes, if it be not already going on. I have been giving attention to this symptom for several years, and am impressed with the belief that, in a majority of cases, it affords the necessary warning, by which the physician may not only be prepared for the fearful ordeal through which his patient is soon to pass, but by timely interference, arrest in its incipiency a hemorrhage that otherwise might soon become direful in its consequences. The late Professor Meigs, in this connection, speaks of an excited and impetuous circulation, and that such attacks ought to be foreseen by the state of the pulse, and met by blood-letting, and that great care should be taken to examine, from time to time, by the touch, externally, whether the womb is firmly condensed or not. The practice here recommended is consistent with the opinion entertained by this distinguished author, that this state of the circulation is one of the causes and not the effect of the hemorrhage; but if we should regard the circulation as being rather in a *perturbed* than an *impetuous* condition, and that this perturbed condition is the *effect* and not the *cause* of clots forming or already existing in the os or body of the womb, or both, it would be difficult to conceive how the exigency could be avoided otherwise than by their prompt removal, and by the use of the auxiliary measures usually resorted to, to secure firm contraction. Guided by these views, when I find this state of the circulation to exist, whether the womb seems to be firmly contracted or not, I usually proceed upon the presumption that it is

bleeding, and remove all clots, and use such other remedial agents as will enable me to *know* that my patient is placed in the most favorable condition possible to escape the threatened danger. I think this timely interposition has diminished largely the per cent. of violent cases of hemorrhages, after the delivery of the after-birth, in my practice.

Again: While the theory that a well contracted womb cannot bleed is too well established to admit of doubt, it is not always easy to decide that this contraction is so complete that the danger of hemorrhage does not exist. In the first case herein reported the contraction was apparently so firm, as evidenced by the hardened globe beneath my hand after repeated examinations, that I could hardly conceive it possible for the hemorrhage to occur, and thus deferred the examination until the more urgent necessity demanded it. A wiser course would have been to have treated the case as one of active hemorrhage from the moment I discovered the disturbed pulse.

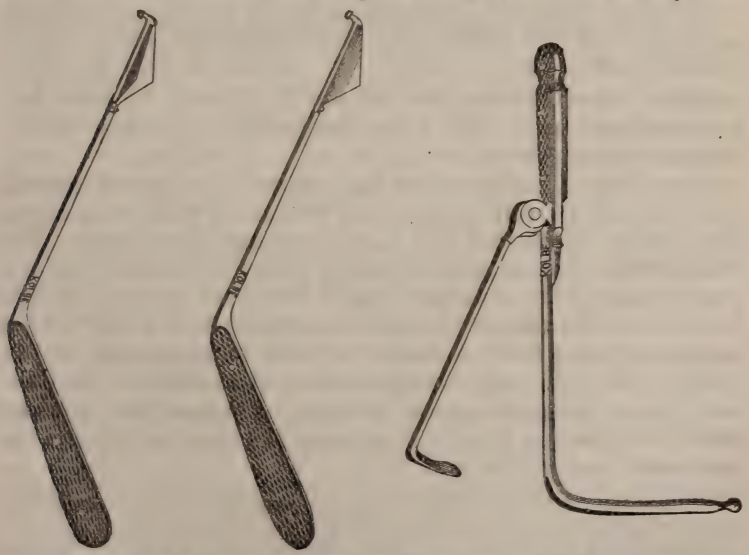
ART. IV.—*Experience in Texas Regarding Urinary Calculi—New Instrument for Lithotomy.* By GREENSVILLE DOWELL, M. D., Professor of Surgery in the Galveston Medical College, Texas.

Mr. —— came to me from Liberty Co., Texas, where he had lived several years. He said he was plowing, when, feeling some uneasiness about the urethra, with an itching, and experiencing some difficulty in making water, he broke off a small gum-vine and pushed it down his urethra until about one foot was put in. From that day until the present time he has suffered greatly in making water, and from straining at stool—would almost go into spasms. Blood and pus frequently passed. He soon applied to a physician in Liberty, who gave him various medicines, which did no good. The doctor, however, finally sounded Mr. ——, and declared that he had a stone in his bladder. The doctor then got a lithotrite, and tried to crush the stone, but failed in his efforts to do so, and the patient says he was much worse afterwards than before. Consequently, he went to Houston, and put himself under the care of Dr. Stewart, who was preparing him for an operation by giving him internal treatment. While in Houston, he became frightened at his condition, and returned home. Finding that he was growing worse day by day, he came to me, fully persuaded in his own mind that he must die unless speedily relieved.

I sounded him, and easily detected a stone. After the sounding, he suffered a great deal, and passed a small quantity of urine mixed with blood, pus and mucus. He had a cough, was the subject of malarial cachexia, and was thin and much debilitated. The question was, what should be done to afford relief. He was poor; had only a few dollars—not enough to pay his board. Malaria prevailed in the section of country in which he lived, and to send him back home was almost sure death. With a full understanding of his chances for recovery, which were of the most doubtful character, he said he would be operated on, as it was death anyhow, and he could not suffer more than he then did. Accordingly, I put him on treatment—morphine to allay pain, which medicine he had been taking in large doses for months, and tincture of cinchona as a tonic, and syrup of tolu to relieve his cough. He then sent for his son to nurse him.

A day was selected for the operation when all the medical class might witness it. It unfortunately proved to be a very rainy and cold day. The patient's cough was worse, but he had no fever, and we supposed his cough was merely bronchial in character, and occasioned by his malarial infection.

The patient being chloroformed, I made the lateral section with the instruments here represented, which are of my own



pattern, and which are almost self-acting. All the knowledge necessary for their use in lithotomy is to know where the bulb of the urethra is, and to know how to insert the sound. It will

be seen, by reference to the figures, that the curve of the staff and of the urethrotome is the same as that of the instruments used by Prof. N. R. Smith, of Baltimore, and are like those instruments, with the exception that Dr. Smith's instruments have a cup and hollow groove for the bistourie, while mine have a fenestrated groove. In my instrument, the staff is grooved at the point where the urethretome cuts into the urethra, and on the back of the blade is a groove for the gorget, which has a point in it that passes behind the blade and enters the groove; when the point is passed into the groove, it cannot get out of it, nor slip to the right or left, nor cut the rectum or pubic artery, unless these are anomalous in their course. It has to be pulled back to the point of insertion before it can be removed. If the urethretome does not cut a way quite large enough for the gorget, the incision should be slightly enlarged by a common bistourie, and then the gorget is used, the fingers inserted, and the staff removed, as was done in the case now under consideration.

The stone in this case proved to be phosphatic, and was crushed in removal—the fragments being all carefully removed. In the centre of the stone was a portion of the twig which the man had inserted on the day that he was plowing.

There was very little hemorrhage during the operation, which was completed in a few minutes, and the patient rallied quickly from the effects of the chloroform. He was at once put upon morphia, but that night he had a chill, followed by fever, and pneumonia set up in both lungs, from which he died on the 8th day after the operation.

Post Mortem.—Abscess on both sides of the prostate gland, the right side of which was packed with small particles of stone. The incision on the left side passed through the abscess. The bladder was much contracted, and in folds; the mucous coat was rubbed off, and the muscular coat looked black and livid. The lungs were not examined, as all were satisfied from the symptoms and signs during life that the patient died of pneumonia. It was evident, however, from the examination of the bladder and the condition of the prostate and surrounding tissues, that it would have been almost a miracle if recovery had resulted, even if the pneumonia had not set in.

Remarks.—I believe that natives of our State are remarkably exempt from urinary calculi, as we use cistern water mostly. During the 23 years in which I have practised surgery in Texas —chiefly in Brazoria, Gonzales and Galveston Counties—I have seen only the following cases: None in Gonzales County,

where I spent the summer of 1853, and where there were but few cisterns. In Brazoria, I saw no cases of stone in the bladder, but treated four cases in old men for "fits of gravel"—all four parties being natives of Tennessee or Kentucky. One of these men died from putrefaction resulting from the impaction of a small stone in the ureter, which caused retention of urine. He died in a comatose condition, with signs of urinary infiltration in the perineum. Another of the parties recovered under treatment by bitartrate of potash, gr. xx, three times daily, with the use of onions, parseley, carrots and lettuce as diet, with other ordinary food. I think that the long use of these vegetables as diet, to a certain extent, acts as a solvent of most urinary calculi. In this case, at least, they seemed to be successful in their action; in addition, the patient, in accordance with instructions, moved from his former location, and used cistern instead of well water. The other gentleman was frequently relieved by anodynes, but finally died in a "fit of gravel" like the first of these cases, who lived on an adjoining plantation. The fourth case was a gentleman from Tennessee, who had been suffering for several years with symptoms of gravel. He came to my office in Columbia one morning in 1858, with a calculus, of the oxalic acid variety, lodged in the canal through the glans penis, and which could even be seen. The patient had tried to pull it out with forceps, and failed. The glans was much swollen, and exceedingly painful. The patient would not allow me to touch it until I had put him under chloroform; I then tried to pull the stone out with forceps, but could not. I then slipped the steel probe with its scoop-end under and behind the stone, and prized it out. The stone was expelled with so much force as to fly up to the ceiling of the room, and was broken into three pieces by the fall. It had a brick color, and was very rough, with three distinct points, like the little iron instruments in playing chuck-a-luck.

The next case that I met with (and the first that I saw in Galveston) was in 1864. A young man about 18 years of age, German by birth, was brought to me by the late Dr. Sanctor, of Galveston. This young man had a small stone, about the size of a pea, in the urethra, just anterior to the rectum, which

was readily removed by means of the scoop being passed behind the stone.

Surgeon Fisher, in 1864, brought to me a boy, about 14 years of age, a native of Houston, with calculus in the bladder of five or six years' growth, which was easily sounded. He also suffered from prolapsus ani. He was the subject of chills and fever. After restoring his general health with quinine and mercurials, it was determined to operate. As all the doctors were Confederate Army Surgeons, and the war in progress, we could get no other instrument specially made for the purpose than a sound of the old staff-style, and a straight bistourie and forceps, which we determined to use. Assisted by Surgeon Fisher and Asst. Surgeons Rugsley and Francis, the patient was chloroformed, and I made the usual left lateral incision. When prepared to make the prostatic plunge, the prolapsed rectum came down, and, instead of pushing it backwards, I pushed it up, and got Dr. Fisher to hold it up and back, while I took hold of the staff. In thus making the incision, the rectum was contracted by its spasmodic action, and thus was cut. The stone, however, was easily seized with the forceps and removed, and the patient did well; but fœcal matter passed through the urethra for several weeks, until I operated as for *fistula in ano*. This fistula gave me great trouble, but after six or eight months it healed, and the patient afterwards did well.

It was the cutting of the rectum in this case that caused me to modify the fenestrated staff of Dr. Goodwin, which was only slightly curved, and adopt one more like Dr. N. R. Smith's instrument. Dr. Goodwin's staff also pressed down on the rectum, and his gorget was couched at the blade, while mine is couched at the handle. The blades in my instrument are movable, and narrow or wider blades can be put in. The urethral part of the staff can be unscrewed also, and a larger or a smaller staff used instead, and thus the same handle and urethrotome can be used for all cases. The gorget can be used for either the lateral, bilateral or median incision—the blades simply being changed. These instruments are undoubtedly the safest and best that I have seen used in perineal lithotomy. (See cuts.)

A negro girl, aged 9 years, born in Colorado County, was op-

erated on in 1865 for stone in the bladder, about the size of an almond, by cutting on a grooved director, outwardly from within, one half of the sphincter, and by dilating the other portion with fingers, so as to insert the forceps and seize and remove the stone. The patient's legs were tied together for eight days, and she was cured. She has perfect retention of urine, and remains well to this date.

I was called, in 1868, to a child 14 months old, native of Galveston, who had retention of urine, and whose penis was swollen out of all proportion. I inserted a No. 4 catheter, and struck a stone (the size of a pea), about an inch from the meatus. Not having a scoop with me, I extracted the stone with a lady's hair pin without any difficulty.

In 1869, a mulatto woman, aged 40, from Grimes County, came to me. She suffered greatly in urinating—had often to rest on her hands and knees to relieve the soreness in her bladder. She had been passing for months a red, brick-dust sediment in her urine. I sounded her, and distinctly felt a rough, grating surface; and after each sounding, she suffered a great deal of pain, and discharged particles of calculi. In the presence of the class, and assisted by several of the Professors in the Galveston Medical College, I commenced the operation by passing a catheter in the urethra, and a Sims' speculum in the vagina—the patient being chloroformed. I made a straight incision through the vesico-vaginal septum, with a long-handle knife, and with lithotomy forceps and fingers, I removed only some small particles (several drachms) of stone, soft in consistence, and somewhat like elaterium in appearance. Professor Goodwin, on chemical examination, found these particles to consist of phosphates of lime and soda. The wound was closed by Sims' sutures for vesico-vaginal fistulæ, and in eight days the patient recovered; but I learned last year that the old symptoms had returned, when I prescribed 10 drops of nitro-muriatic acid ℥in water three (?) times daily, and I have not heard from her since.

I have seen only one other case in Texas—a negro man from Fannin County, in 1872, who refused to be operated on, and who died last year from the effects of stone.

ART. V.—*Cholera Infantum.* (A lecture* delivered to the summer class of the Medical College of Virginia.) By OTIS FREDERIC MANSON, M. D., Professor of Physiology and Pathology.

Gentlemen,—We have passed in review the various forms of disease ascribed to the morbific agency of malaria, from the simplest cases of intermittent neuralgia, through the periodical neuroses, up to the gravest forms of fever, inflammation and hemorrhage. We have called your attention to the fact, that many of these varieties of disease were universally admitted to arise solely from the deleterious influence of malaria, whilst some of them were considered to be composite forms of disease, arising from other causes, acting in conjunction with the malarial intoxication.

Whilst admitting that the number and complexity of the morbid manifestations arising wholly, or in part, from the same or mingled causes, are liable to confuse and bewilder you at the outset of your studies, yet, as physicians of the future, it will be indispensably necessary that you should become intimately acquainted with each of these varieties of disease, and should acquire such a perfect familiarity with their features, as to be enabled to recognize them readily at the bedside.

It would seem that the catalogue of affections attributed to the action of malaria was already sufficiently extended without any new additions being made to it; yet, I should consider one of the most important duties I owe to you and humanity was neglected, if I did not, on the present occasion, endeavor to add another to the long list already mentioned. I therefore invite your attention this morning to a disease which, in my judgment, ought to be classed among the *pernicious malarial fevers* of authors—a malady which, from its frequent occurrence and great fatality, as well as from the innocent and helpless character of its victims, possesses a peculiar and absorbing interest to the American practitioner and the American people. The disease to which I allude is that usually termed cholera infantum.

Permit me to premise that although the views I shall now lay before you have been long entertained and acted upon by me,

*This was one of a series of lectures on the General Pathology and Therapeutics of Malarial Diseases.

yet I have felt it my duty to weigh well everything connected with the subject before giving it publicity. I feel the liveliest sense of the heavy responsibility incurred in advocating a new pathology, and more especially a new line of treatment, in such a grave and extensively prevalent malady; and you may therefore receive what I shall have to say now, not as the offspring of a passing fancy or immature judgment, but as the result of frequent and prolonged observation, and, I trust I may be allowed to say, of as deep and conscientious reflection as I am capable of bestowing.

It would be impossible in the brief space of time allotted to me in the summer course of lectures to treat this subject *in extenso;* indeed, I should be wandering from my sphere, and be trespassing upon the domain of special pathology were I to do so; yet, as it is obviously necessary in discussing the general pathology of an important class of diseases that the conspicuous features should be developed, that the main facts should be mentioned from which the general induction is to be drawn, I shall, therefore, as concisely as possible, call your attention to the leading points connected with the *history*, *symptomatology*, *etiology* and *therapeutics* of the disease.

History.—It is a source of deep regret that the literature of such an important disease should be so meagre. I have been unable to obtain any satisfactory information concerning it from any European source. If it exists among these authorities, it has eluded a very careful and earnest research. So little, indeed, have I found in European works on the subject of diseases bearing a remote resemblance to cholera infantum, that I have been led to doubt the existence of the malady in any of these countries. If it appears there at all, it must occur sporadically, and not, as in this country, as an annual devastating epidemic disease. If a disease so frequent in its occurrence, so widespread in its prevalence and fatal in its consequences, were found in or about the great capitals of Europe—the centres of medical learning and the fecund source of authors, we should, ere this, have had numerous and extensive treatises upon the subject. On the other hand, we have a few good descriptions of the phenomena and anatomy of the disease from American writers, by whom it is generally regarded as essentially an American disease.

Let us now glance at the principal circumstances connected with the phenomena, appearance and prevalence of this malady. And *first*, as we have said, it is an *epidemic* disease prevailing among the new-born and nursing infants of immense regions of country, and usually occurring annually. It is not, strictly speaking, an *endemic* disease. It is not confined to any *circumscribed* locality or definite section of country. It is not at all peculiar to cities, but on the contrary, prevails epidemically among the children of the rural population, and often there assuming its most malignant form. It prevails in country regions among the wealthiest as well as the poorest inhabitants, and in the most sparsely settled districts, where there is no overcrowding, no sources of domestic filth or animal infection, and where such diseases as are supposed to arise from great density of population are unknown. On the other hand, many sections of country are entirely free from its ravages, and in which it is only known by report. These are usually elevated or mountainous regions, distant from uncontrollable water-courses and overflowed lands and marshes. In the densely populous cities of the Old World, where drainage has been comparatively perfected, and where every inch of soil, within and around them, has either been covered by a building or is under constant cultivation, this disease, as far as we can ascertain, is unknown. In regard to the extensive prevalence of this disease in the country districts, I will state that the assertions here made are based upon my own observation, having been a country practitioner for twenty-one years of my life, and from conversations and correspondence with many country physicians engaged in extensive practice, whose experience entirely coincides with my own. That this disease does not prevail in the great cities of Europe is proven by the fact that their writers do not mention it or describe any disease that corresponds with its symptoms.*

As its name implies, this is a disease of infancy. It may attack babes at any period between birth and 2 years of age, and in rare cases even older children have been affected. Accord-

*In treating of the severer forms of diarrhœa in which "death takes place in a few hours," Dr. West, the distinguished London writer, says that he has "never seen an instance of it himself," but that this rapidly fatal termination is far from unusual in the Southern States of America, where diarrhœa, under the various names of cholera infantum, the summer complaint or gastro-follicular enteritis, annually destroys many thousands of children.—*Diseases of Infancy and Childhood*, 2d Amer. ed., p. 389.

ing to my experience, infants between five and nineteen months are most liable to its assaults. It may, however, assail infants a few days after birth, or it may defer its first invasion until the child arrives at the age of two and three years.

Fatality.—This is a disease of frightful mortality. We have been, however, so accustomed to its annual ravages that the death of a hundred infants from this disease only excites a passing remark. "So use doth breed a habit in a man." Were as many to die of an imported disease, such as Asiatic cholera or yellow fever, it would excite general consternation, and lead to the most expeditious emigration.

Symptoms.—So prevalent among us, gentlemen, is cholera infantum, that the *symptoms* are doubtless familiar to most of you. We must, however, relate them succinctly, in order that our remarks upon its pathology and treatment may be properly understood.

The mode of invasion varies in different cases. Premonitory symptoms, such as irritability of temper, disturbed sleep, feverishness and diarrhœa, are often observed for a week or more before the disease assumes its characteristic gravity. This is announced by frequent vomiting, increase of fever, inextinguishable thirst, restlessness, sudden failure of strength, and rapid emaciation.

As far as the symptoms referable to the stomach and bowels are concerned, there is remarkable similarity between this disease and Asiatic cholera, so much, indeed, that in the present state of our knowledge, if we were to confine our observations to the gastro-enteric symptoms, we should often be unable to discriminate between it and the Oriental disease, As the latter is, however, of rare, whilst the disease under consideration is of annual occurrence, we shall only be troubled in our diagnosis when the imported disease is epidemic, and when under the influence of the more potent epidemic cause, the cases of the domestic disease become merged, and even indistinguishably intermingled with the foreign scourge. The diagnosis, therefore, is usually simple and easy, as it resembles no other disease except, it may be, some cases of poisoning by the known toxicological agents. Even here, the history of the case, the character of the epidemic and the ulterior course of the disease, will usually enable the intelligent practitioner to diagnose correctly.

But there are other symptoms of equal, and, I may say, of more importance in this disease than those referable to the stomach and bowels. We have present along with these symptoms, *fever*, the great foe of the human race. Although in many cases this fever is slight at the commencement, and only to be ascertained by the thermometer, yet a careful examination with the instrument will generally detect an increase of heat above the normal temperature at the onset, whilst later it is plainly apparent to the most unpractised touch. I again urge upon you, as I have in my observations upon clinical thermometry, the importance of using this instrument in every serious disease. This fever of which we speak has its peculiarities. In the first place, it is obviously remittent in the great majority of cases, and in some it is clearly intermittent in its type. In others, however, it is continuous in its course, just as it is frequently observed in ordinary malarial fever in the adult, and which the old writers, to distinguish from typhus and typhoid fever, termed *subcontinued*. The heat measured by the thermometer, however, will usually show *remissions* or *intermissions* and exacerbations of the fever in every 24 hours—the remissions and intermissions usually occurring between midnight and 11 o'clock of the following morning, whilst the exacerbations, though commencing commonly in the afternoon, may postpone their appearance until the early hours of night. There is another trait in this fever that is eminently deserving your attention—its external manifestations are often very partial. As a rule, the head is the warmest, and next the trunk, whilst the extremities may be even pleasant, or cool, or even cold. Unequal distribution of heat, as measured by the thermometer, and very sensible to the touch, is a frequent phenomena in this affection, and especially in the grave cases; indeed, it is a grave symptom in any disease. The temperature may rise in the exacerbation to 108°F., whilst the surface of the extremities are below the normal temperature, and then may even descend to 95°, as in the algid cases of Asiatic cholera.

With the fever, we have its usual attendants, when occurring in children, The child, when not vomiting or purging, is usually drowsy, and in severer cases is delirious or comatose. The pulse is quick, frequent, contracted and compressible, and never full or hard. Along with these symptoms of fever, there is insatia-

ble thirst, restlessness, fretfulness and agitation. Usually there are symptoms of undue excitement or oppression of the brain present—even in the early stages. At first, the matters ejected from the stomach by vomiting are those taken as food, these are succeeded by ejections of the gastric secretions, *colorless* or tinged with bile of a yellowish or greenish hue. The intestinal evacuations are varied. As a rule, they are deficient in any of the hues derived from the bile pigments. They are usually fluid, of a dull brown or yellow ochreish hue, or of some of the hues of blue and green, or colorless like rice water. Although yellow and green, as we have said, the true healthy bile pigments are wanting, and you will gradually learn to distinguish the peculiar bright clear tints of brown, yellow and green due to the presence of bile from other evacuations. It is a remarkable fact, to which I wish to call your attention, that in cholera infantum, as in the ordinary intermittent and remittent fevers of adult life, however copious and frequent *bilious vomiting* may occur, yet there is no evidence of the presence of the smallest quantity of bile in the *intestinal* dejections until the febrile action disappears. The re-appearance of bile in the evacuations of a blackish-green color in protracted cases, and of a lighter green or bright-yellow color in milder cases of shorter duration, is the usual harbinger of convalescence. No case can be considered cured until the liver resumes the regular and healthy exercise of its functions. Often the first symptom of relapse is the return of colorless or slightly colored stools, untinged by the bile pigments, having an offensive odor, and being deficient in consistence. Rapid and excessive emaciation is a characteristic symptom of this disease. The skin becomes pale at the commencement, with a bluish tinge around the mouth and eyes—the latter sink in their orbits, and give to the countenance the physiognomy of exhaustion. The patient may be said to shrink owing to the excessive watery evacuations from the stomach and bowels. We have told you in our physiological lectures that water constitutes by weight, according to the best authorities, from two-thirds to three-fourths of our bodies. We may, therefore, say that the human body in cholera infantum *shrinks* as evidently as a wet cloth under the wringing hands of the laundress. The emaciation occurs too rapidly to be attributed to

the absorption of fat or the other solid tissues. This occurs later in the disease. That the rapid emaciation is produced by the fluid evacuations is also proven by the quick re-assumption of plumpness and *embonpoint* in a few days, where the case has been properly treated, or when the disease spontaneously and rapidly subsides. As the disease advances, however, in slow cases, as in other febrile diseases, wasting of the solids of the body ensues. The adipose tissue which gives to infancy its charming, rounded forms, and in which the lines of beauty are seen undulating over every limb and feature, now becomes rapidly absorbed. The skin falls down and contracts over the bones of the face, and where the fat is predominant, so rapid is its absorption that the integuments, not having time to contract, as on the limbs, hang loosely from them in folds. The eyes, which sank suddenly in their orbits at the commencement of the disease, sink still deeper in their cavities, the features become sharpened, the cheeks become excavated, the mouth becomes more prominent, and the lips thin and wrinkled.

As the disease advances, the abdomen, which in the early stages of the disease is usually shrunken, becomes more prominent, and sometimes tense and tympanitic. The liver, in some cases, becomes greatly enlarged, as evident not only on percussion, but to the eye. The urine is usually scanty from the onset of the disease, and in some cases is decidedly albuminous, or may be entirely suppressed. Sudamina appear on the skin, emaciation increases, and the patient dies from exhaustion.

In cases, however, of more rapid character, the fatal termination occurs before any very great wasting has time to occur. The little sufferer dies swiftly, in coma or delirium, in convulsions or in an algid paroxysm, with its dimpled beauty almost unimpaired by the touch of the Destroyer. Memory brings back to me such a scene—a dead angel in the lap of weeping Love—reposing, an incarnate statue chiselled by the inimitable hand of God.

"And but for that sad, shrouded eye,
That fires not, wins not, weeps not now,
And but for that chill, changeless brow,
* * * *
We still might doubt the tyrant's power,
So fair, so calm, so softly sealed,
The first, last look by Death revealed."

Ah! gentlemen, the world has witnessed many such sights, caused by this malady. If what I am saying to you now shall enable you, as I believe it will, to wrest one human flower from the withering touch of Death, I shall be more than recompensed for my labors.

Duration.—There is nothing fixed or definite in the duration of this disease. Death or convalescence may occur in 24 hours from the first appearance of the symptoms, or the case may terminate in chronic fever, with evidences of intestinal inflammation and ulceration, and finally, after weeks and even months duration, may end in perfect recovery or death,

Pathological Anatomy.—In cases terminating in death within 24 to 48 hours, or even longer, from the invasion of the disease, no lesions have usually been found to unveil the source of the symptoms or account for the death of the patient. Where the case is protracted, however, important structural lesions have been found. Appearances of inflammation of the membranes of the brain, with extensive effusion, have been usually noted, and, in some cases, inflammation and softening of the brain substance. The *liver* has been found enlarged—in some cases enormously hypertrophied, and engorged with blood. The mucous membrane of the *small intestines* is almost universally changed in its appearance, and presents evidences of well marked inflammation. The large intestines usually present no conspicuous change, except in those instances in which dysentery has complicated the case. In cases in which the disease has run a very protracted course, ulceration, thickening and consequent diminution of the calibre of the canal of the small intestines have been frequently observed.

Etiology.—What is the cause of cholera infantum? Various hypotheses have been offered on this subject. After many years of observation and reflection, I believe that it is due to *malaria*, and by malaria I mean the cause of intermittent fever. The facts and arguments in support of this view will be concisely presented.

In the first place, it is a *febrile disease*, and this fever, in a majority of cases, is of a marked *periodical* character, characterized by morning remissions and evening exacerbations, and in some cases is *positively* of an *intermittent* type.

2d. It prevails chiefly, and, I believe, *solely*, in localities in which the ordinary forms of malarial fevers prevail, and its gravity is in direct proportion to that of the contemporaneous remittents occurring in older subjects. I have often seen the adults of a family prostrated by periodical fever, whilst the tender infants of the same household presented all the symptoms of cholera infantum.

3d. Other symptoms of cholera infantum strongly resemble those found in some of the forms of pernicious fever occurring in persons beyond the infantile age. The nausea, vomiting and purging are the characteristic symptoms of the *choleric* form of pernicious fever, as described by Morton, Torti and others. The unequal distribution of heat, and the coldness of the extremities in cholera infantum, bear striking resemblances to those present in the congestive or algid form of miasmatic fever. The cerebro-spinal symptoms so prominent in cholera infantum, are so frequently present in periodical fever that many authors have been led to consider irritation or inflammation of the brain and spinal marrow as the characteristic lesion, and as the origin of all the objective phenomena.

4th. Both diseases prevail in the same seasons. Though periodical fever may appear at any season of the year, yet it is well known that it usually makes its advent with the warm season, and usually disappears, in a great degree, after the appearance of frost. It is true that periodical pneumonia may occur during the winter and spring, but this is an exception among those diseases classed among the pernicious fevers.

5th. As will be seen, it is cured by the same remedies which are universally recognized as potential in the treatment of all forms of periodical fever.

6th. The great tendency to sudden and spontaneous relapse observable in the recognized forms of malarial fever, is equally as conspicuous in cholera infantum. In no other diseases with which we are acquainted are relapses so frequent as in these—certainly in none prevailing in this country.

7th. Negative arguments are not wanting to support this view of its etiology. To what other cause can be attributed its existence? It is uot due solely to heat, or else we should find it prevalent in the same latitudes in this country, especially in the

non-miasmatic districts. It is not produced by overcrowding or animal exhalations, for it is unknown in the largest and most densely populated cities of the world, as in London and Paris. Is it possible that a poison which shows so great malignancy in its effects upon the infant, could prove innocuous to older children and adults? Is there any other grave disease known to which infants are liable from which adults are entirely exempt? Its existence is not, of course, due to the poison causative of Asiatic cholera, for it is an habitual epidemic, whilst the Oriental disease prevails at long intervals. That the vomiting and diarrhœa, as well as the fluids ejected present some peculiarities in cholera infantum not *usually* observable in the periodical fever of adults, is true; but we may, however, observe that in cases of the algid and choleric form of pernicious fever, occurring in grown persons, we have not unfrequently observed not only these, but nearly all the symptoms of malignant Asiatic cholera. May we not reasonably attribute the peculiarities of the phenomena in cholera infantum, as distinguishing it from the usual forms of periodical fever, to the physiological susceptibilities and sympathies belonging to infancy?

The stomach, in the early period of life, is perverted in its functions by very slight causes. Indeed, vomiting in infancy may be almost considered a physiological phenomenon destined to protect the tender being from the consequences of simple distension on the one hand, or of deleterious food on the other. The mucous membrane of the intestines is also highly sensitive, and will usually bear the presence of nothing but the most innocent of all food—the mother's milk. It is needless to dwell upon the impressibility of the nervous system in infants, so well known even to the unscientific, and which we have sufficiently dwelt upon in our lectures on General Pathology in the winter course. But we may here observe that it is very probable that the nausea, vomiting and diarrhœa in the early stages are merely symptoms of perverted innervation, as in the rapidly fatal cases no lesion of the mucous membrane of the alimentary canal has been found to explain their occurrence. That the cerebro-spinal and sympathetic system of nerves are prominently perverted in their functions at the onset of the disease there can be no doubt. All the symptoms indicate it, but whether the functions

of the ganglionic system are primarily or secondarily disturbed admits of debate, and is a question difficult to decide. My own impression is that they are usually simultaneously involved, and that there is no sufficient reason why such exclusive importance should be attributed to the cerebro-spinal system in this and other forms of malarial intoxication. It is true that the disturbance of the cerebro-spinal centres force themselves strongly upon the attention of the observer; but it is to be noted that in some cases the symptoms referable to this portion of the nervous system are but feebly pronounced, whilst the vegetative functions are as deeply and as seriously involved as occurs in Asiatic cholera.

We have seen heretofore that a person under the influence of malaria may present very slight external evidence of its action; that it may be indicated solely by a painful affection of a minute nerve, as in periodical toothache, or may declare itself by the most serious implication of the cerebro-spinal system, as seen in periodical cephalalgia delirium, coma, convulsions, etc., facts disputed by no respectable authority. Why this morbific cause should show itself in so many protean forms, we cannot explain, but as we have intimated, it is highly probable that the physiological peculiarities of infancy may explain the peculiarities of the phenomenon produced by its agency in cholera infantum.

We have been induced to say this much on the subject (confessedly obscure) of the pathology of this disease, not because we wished to establish a favorite theory, but that we believe that in this case a correct theory will lead you to pursue and persevere in a proper line of practice.

It is a fortunate thing for humanity to be able to introduce a disease not hitherto classed as such into the ranks of pernicious malarial fevers—the family of diseases for which we have a remedy more potent than all others combined against all other maladies. Such efforts may be truly said, when crowned by success, to be triumphs of science, and victories over death.

Treatment.—We now arrive at the most important branch of our subject in this important disease. It has already been indicated by my remarks upon its pathology. For many years I have treated this disease as a form of pernicious fever, and have met with the most gratifying results, and *I do not hesitate to say*

that the general adoption of this line of conduct will greatly diminish the mortality from this disease. But there are difficulties to encounter in the treatment of this malady not usually observed in the pernicious fever of adults. The excessive commotion of the alimentary canal usually present, offers a very great impediment to the introduction of appropriate remedies, but the difficulty, happily, is not wholly insurmountable. With the proper knowledge of the action of the main remedies, and with watchful patience, discrimination and care, we may usually conduct the case to a successful issue, provided that treatment has not been too long postponed. You should lose no opportunity of impressing upon your friends the importance of early treatment in this disease. A few hours' delay is often a fatal procrastination.

Called to a patient *early* in the course of the disease, in the *day time*, in whom the symptoms are not very urgent, I usually prescribe calomel in minute doses. Mixed intimately with a few grains of sugar, in doses of from $\frac{1}{3}$ to a $\frac{1}{2}$ grain, it is placed on the tongue every half hour, or hour, until the presence of bile in the alvine evacuations is clearly evident. At the same time, we employ means to tranquilize the stomach. A sinapism is placed over the gastric region, and, if the extremities are *cool*, warm sinapised pediluvia are used, and frequently repeated. If the head is too *warm*, as it almost universally is, in the grave cases, cold water or ice is applied freely and assiduously. If delirium, or coma, or convulsions be present, the cold *douche* is employed. In our efforts to reduce the abnormal heat, we must, however, guard against *chilling* the infant. Cold water, as a rule, should be allowed freely as a drink. It is true that it is often soon rejected, but this is no objection to its repetition; for besides washing out the acrid gastric and hepatic secretions, usually present in the stomach, it also allays the agonizing thirst, and reduces the abnormal internal heat. Granulated ice may also be freely given. If the vomiting is very persistent, you should promptly follow the *sinapism* with a *blister* of cantharides. Lime water mixed with milk, in equal quantities, should also be frequently given in desert spoonful doses, cooled with ice. If symptoms of exhaustion from excessive vomiting and purging are present, give an enema of laudanum

in gum arabic or starch water, say 3 or 4 drops in a desert spoonful of the vehicle, and repeat in an hour, if necessary. The employment of opium in the febrile diseases of children, however, demands great judgment and discrimination, of which we shall speak hereafter.

Called to see a patient *at night*, along with the means already advised, you will now make an important addition to your treatment. We usually, unless the case is very urgent, postpone the administration of the grand remedy, quinine, until the late hours of night. Then the violent excitement and commotion of the exacerbations have passed. The stomach is then not so irritable. Quinine, a sedative and narcotic, is assisted in its action by the physiological tendency of the nervous system to repose in the night season, and you have ample time to exhibit enough of it in order to prevent the threatened exacerbation of the next day. I am sure that the remedy is better borne, and produces its salutary effects in the most perfect manner, when exhibited in the late hours of night. At midnight, then, we can commence its use. To an infant of six months of age and under, we give a grain of Powers & Weightman's sulphate of quinine with a few grains of white sugar, diffused in a teaspoonful of cold water. To a child of 12 months, we give 2 grains of quinine, and to one of 18 months, 3 grains. If the dose is immediately *rejected*, we repeat it over and over again every half hour. After a few repetitions enough will be absorbed by the mucous membrane of the mouth and stomach, or by the former alone, if it is not even swallowed, to bring the little patient fully under its influence. If the first dose is, however, entirely *retained*, we allow the patient to rest for three or four hours. We then repeat the dose, and continue to repeat it until the thermometer in the axilla and the finger on the pulse indicate that rapid sedation is ensuing. In the large majority of cases, these effects will follow from the administration of the sulphate. The pulse will become slower and less active and bounding; the head will become cooler; and the extremities, if previously below the normal temperature, will become warmer. "*The heat will descend to the feet*," to use the forcible language of Hippocrates. Not only this, but the vomiting will become less frequent, or will often *entirely cease*. *After the first dose of quinine has been*

absorbed, the bowels will become more quiet, and the renal secretion more copious. The little sufferer will become tranquil, and fall asleep, sometimes for hours without awaking; but it can be easily aroused, if necessary. The narcotism produced by quinine, in this respect, is unlike the stupor produced by opium; and besides this, instead of having a tendency to produce congestion of the brain like opium, it has, beyond all other remedies, the power of *removing an excess* of blood from the cerebral vessels. In five or six hours aftor the administration of quinine has begun, in the large proportion of cases, seen early in their course, the fever will have *disappeared*. When this occurs, cease medication for the day. On the next afternoon or night, a slighter exacerbation will often make its appearance, and this may recur for two or three nights thereafter. If this is the case, repeat the quinine in similar or diminished doses, *giving it more freely in direct proportion to the violence of the fever*. At the same time, we continue the calomel, or employ blue mass, until the presence of pure, healthy bile in the dejections is perfectly evident. Now that the fever has vanished, you may associate opium in minute doses with the mercurials. If blue mass is given, have it triturated in a teaspoonful of simple syrup, and add the laudanum to it.

As long as the discharges are offensive, or as long as they are clay-colored or white or *watery*, we must continue the use of the mercurial and quinine. *The patient is not safely convalescent until the hepatic and renal secretions become normal.* Of course, after the fever has been conquered, we do not need the *sedative* impression of quinine, and therefore give it in small doses of a grain three or four times a day for four or five days. After this, we guard against relapse by resuming the use of quinine and mercurial, as soon as the hepatic secretion becomes vitiated or diminished, for as soon as this occurs, vomiting, or diarrhœa, or both, will return.

Should you be disappointed in bringing the patient fully under the salutary influence of quinine administered by the mouth, you may give it by the rectum, and should this be expelled, we have, thanks to a recent discovery, an invaluable resource in the hypodermic method. Dissolve the dose to be given in a half drachm of distilled water, by the addition of *two* drops of dilute

sulphuric acid to the *grain* of the sulphate, and inject it beneath the skin of the arm, just immediately below the insertion of the deltoid muscle. Used in this way, only one-half of the quantity usually given by the mouth will be necessary. If you have to repeat the dose, inject it in the other arm in the same manner. This mode of medication, however, will be rarely required, for there are objections to its use in this way—the principal one being the excitement of local inflammation, and the production of troublesome abscesses. Usually, by persistence in its use, enough quinine will be absorbed by the buccal and gastric mucous membrane to bring the patient under its influence.

In regard to the employment of opium, much caution is required. It is not generally borne well at the commencement of the attack, especially if there be fever and determination of blood to the head. After a few days, when the system has been depleted by the excessive discharges, and symptoms of nervous exhaustion ensue, we may properly call upon its aid, and derive the most signal advantage from it. I prefer McMunn's elixir of opium to any other preparation for infants, and it may be given in doses of two to five drops, according to the age, and repeated at intervals of two or three hours, if necessary. Night is the best period for its administration, if the case will allow you to wait.

In urgent cases, we cannot wait until night before we administer quinine. When the danger is imminent, it must be given forthwith, and repeated until the patient is fairly under its influence. As evidences of its sedative effects appear, discontinue or diminish the dose, and resume it if the fever does not continue to decline. Although the prominent symptoms may entirely disappear under this treatment, yet in many cases you will perceive that you have only produced an *intermission* of the disease; you have "scotched the snake, not killed it." Symptoms of hepatic torpor recur with *diarrhœa* and *anorexia*, and more or less febrile disturbance; in a word, a relapse is threatened, but this is usually much milder than the initial attack. By a proper administration of the mercurial and quinine, with the addition of astringents, such as acetate of lead, nitrate of silver, oil of tur-

pentine, infusion of logwood, or red oak bark, you can generally soon place your patient in perfect health again.

In regard to the diet, whilst vomiting and purging are incessant, you cannot hope to nourish your patient. As soon as the vomiting ceases, however, you must commence to support it. The mother's milk is the best nutriment for it. If this is not to be obtained, then you will find the milk of the cow to be a convenient and as good a substitute as any other. In cases of extreme exhaustion, the juice of beef—that manufactured by Mr. Valentine in our midst—will often prove to be an invaluable adjunct.

Clinical Reports.

(1) *A Case of Pelvic Abscess.* (2) *A Case of Retained Menses.* By H. Otis Hyatt, M. D., Kinston, N. C.

(I) *July* 12, 1874. Smithey K., a mulatto, aged 40 years, came to consult me about her womb. She says that three or four years ago she was treated for "ulcers," of which she got well. At this time, she complained of pains in the region of the uterus, and profuse menstruation.

Upon examination, I found the uterus in proper place; os and cervix healthy; probe passed a distance of three and a half inches, and admitted of considerable lateral motion towards its point. Suspecting a sub-mucous or interstitial fibroid, I introduced a sea-tangle tent, tamponed the vagina, and directed her to go home and lie down and return in the evening, when I would introduce a larger tent. Up to this time, I had been in the habit of introducing tents at my office, and had never had cause to regret it.

She returned in the afternoon, when the tent was withdrawn, and it was found to be covered with blood, and a much larger tent was introduced. Next morning, the os was sufficiently dilated to admit my forefinger. I discovered no fibroid or granulations on the inside of the uterus. The case was evidently one of areolar hyperplasia of the body of the uterus. I told her that she might go home and return once a week, and I would see if I could not adopt some means that would reduce the size of the uterus.

Three days afterwards, I was called to see her, and found that the day before she had had a severe chill, followed by fever, painful defecation, frequent micturition, and great tenderness over the lower portion of the abdomen. Gave her quinine and morphine, and ordered warm cloths to be applied over the bowels. Called a couple of days afterwards—this time making a careful examination of the pelvic organs—and discovered an elastic tumor occupying the *cul-de-sac* of Douglas. I aspirated the tumor, and drew off four ounces of pus. Went to see her every other day, and aspirated the abscess each time, with the hope that it would close without opening. After withdrawing by several aspirations sixteen ounces of pus, and finding no disposition in the abscess to close, I made an incision about an inch long through the fornix vaginæ, to allow the free escape of pus. In a few days she had entirely recovered.

The cause of the pelvic cellulitis in this case was, no doubt, due to the second tent. The first one had abraded the mucous membrane of the cervical canal, and the second one having been introduced, plugged up the canal and prevented the escape of fluid from the uterus, while the abraded surface admitted of the easy absorption of septic material.

(II) *June* 20, 1872. Mary G., a stout, healthy woman, aged 32 years, who had never before had any uterine trouble, presented herself with the following history: At the menstrual period, previous to her consulting me, she discovered a rapid swelling in the lower portion of the abdomen, accompanied with great pain, and constant desire to urinate. The menses were very scanty, and contained blood clots. Examining the abdomen, I discovered a conical body, hard and inelastic, extending from the pubes to the umbilicus. The tumor was about the size of a child's head. Vaginal examination showed the mouth of the uterus just within the labia minora, and under the mouth of the urethra. A flexible silver probe was introduced, and passed with all ease its entire length into the cavity of the uterus, at the same time adapting itself to the curve of the posterior surface of the cavity.

Notwithstanding there did not seem to be any hindrance to the free flow of blood from the uterine cavity, I diagnosed the case as one of retained menstrual fluid, from the facts that the

symptoms appeared suddenly and during the menstrual flow, which at the time was scanty. If there had been no other sign, the position of the os would have indicated that the uterus had been suddenly distended, giving the round ligaments no time to stretch or adapt themselves to the size of the uterus, so as to allow the whole body to ascend out of the lower pelvis.

I introduced a sea-tangle tent into the cervix, and sent the patient home. This was the day on which her period was due. The tent dilated the os some little, and during the menstrual period she discharged several clots, and the uterus diminished considerably in size. As soon as the flow ceased she returned, and I dilated the os to the extent of an inch with a pair of forceps, and then packed the cervix full of tents. These soon brought on expulsive pains, and she discharged the whole of the accumulated blood clots. The uterus soon assumed its proper size and place. She has had no farther trouble.

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(1) *Incision of Constricted Os Uteri During Labor.* (2) *Round Worm Escaping Through the Navel.* Wm. K. Gatewood, M. D., Jamaica, Va.

Case I.—On the night of Dec. 9th, 1874, I was sent for to see a lady in her second labor living in King and Queen Co., Va. Upon examination, I found the membranes ruptured, and no obstacle to a speedy and successful termination of the labor, except at the os uteri. There was perfect relaxation of the parts, but the os had dilated to its fullest extent, leaving an opening about the size of a twenty-five cent piece. Being satisfied that an operation would be necessary to prevent laceration, I gave her a dose of morphine and commenced the administration of chloroform to allay her sufferings, which were intense during each pain. Making known the state of affairs to her husband, I requested consultation, which he and his wife objected to; so I had to act by myself.

The case was a novel one to me; but being satisfied that there was no alternative, I went to work by introducing the left index finger in the absence of a pain, and with a probe-pointed bistourie in my right hand, made an incision backwards and up-

wards of 1½ to 2 inches. Turning finger and instrument below and opposite, I made a like incision. It was all done quickly, and without pain or much hemorrhage, and in a few minutes she was delivered of a fine daughter. Only three pains accomplished the work. I never had a patient to do better or suffer less in my life.

I will state here that before her pregnancy this lady suffered intensely during each catamenial period. Since then, she has had three periods without pain. I attribute the relief to the effects of the operation. Should I ever have another such case, I would not hesitate to act as in this one. I feel some anxiety and curiosity to know what will be the state of affairs should she ever have any more children.

Case II.—On the 13th of March, 1873, I was sent for to see a little girl 3 years old, the daughter of Mr. Wm. S. Christian, of King and Queen County. I found the parents of the child considerably alarmed by the appearance of a worm which was trying to come from its navel. Upon examination of the little patient I could see nothing, and hardly could credit their statement, but in a few minutes I saw the thing come wiggling out. It got about an inch, when I seized it with a pair of forceps and drew out a long, round worm, about 10 or 12 inches in length (Ascaris Lumbricoides). After removing it, another soon made its appearance, and I dealt with it in the same way, and so on, until seven were removed. There was no pain attending the removal of these parasites, and no discharge or fœcal odor. I administered to the child when I left a dose of calomel and two grains of ipecac, to be followed by castor oil and turpentine. Next morning she passed one worm by the natural channel. The child was perfectly well, and is now; has never suffered any inconvenience from worms, and is remarkably healthy and robust.

I learned from Mr. Christian that the child had had a tumor protruding from her navel, and was cured of it by a prominent physician of Charles City Co., Va., in 1872, by tying it. In the operation, he must have ligated a portion of the bowel, which is the only cause I can assign for so unusual an occurrence. I mention this case because of its novelty.

Coxalgia Successfully Treated by the Use of Sayre's Hip-Joint Splint. By J. A. DRAUGHAN, M. D., Nashville, Tenn. (Read before Nashville Medical Society, July 1st, 1875.)

May 13, 1875. I was called to see a little girl about 3 years old, the mother having brought her to Nashville for medical advice. The parents had noticed that about three months previous, she would become wearied on exercise, that there was considerable pain at the knee-joint, and that she would spend restless nights. As soon as I saw the case, and learned the history, I had no hesitation in pronouncing it disease of the hip-joint. The signs which presented were pain at the hip-joint, obliteration of the gluteo-femoral crease, slight flexion of the leg upon the thigh; the whole limb was somewhat abducted, and the semi-membranosus and semi-tendinosus muscles were contracted.

The first indication in the treatment was to use extension and counter-extension, which I did by means of the weight and pulley. This treatment I continued for three days and nights until I was satisfied that the contracted muscles were relaxed, and that inflammation had, in a certain measure, subsided. I then removed the extension, and applied Dr. Lewis A. Sayre's "hip-joint splint."

The child, previous to the application of the splint, could not be moved in bed without producing excruciating pain. She was anæmic, and her nervous system very much shattered. As soon as I applied the instrument, and put on the necessary amount of extension and counter-extension with the apparatus, I stood the child on the floor; she was able to place the foot of the affected side to the floor, and bear the whole weight of the body on it without pain—a thing she had not done for four months. She was taken to the country, and a few days since her mother brought her down for me to examine, and to see that the instrument was properly adjusted, when I was amazed at the change which had taken place; the improvement was very marked. The child had been able to play in the open air; she no longer looked anæmic. The mother wrote me a few days after returning home that her child was improving rapidly.

The treatment of morbus coxalgia has, within the past few

years, undergone a revolution. No longer are blisters, poultices and anodynes applied to the diseased joint, but the treatment is almost limited to mechanical measures, such as I have mentioned above.

Correspondence.

Condy's Disinfecting Fluid in Gonorrhœa.

Mr. Editor,—I have seen no publication in which mention is made of Condy's fluid as a remedy in gonorrhœa in this country, though I was aware several years ago that it was used abroad in that disease.

Some months since, I tried it in several cases of long standing, which had resisted other treatment, but was somewhat disappointed in the results. Last week, however, a recent case was so promptly relieved by this remedy, in connection with the use of diuretics, that it seems worth reporting.

The disease had existed about a week without treatment, and under the use of an injection of one part of Condy's fluid to twenty of water, was cured in three days, although the symptoms were as severe as they usually are in subjects who have gonorrhœa for the first time, and in whom (somewhat contrary to text-book statements) I have observed it is not generally as amenable to treatment as in those who have frequently contracted it.

I had used a carbolic acid injection in a similar case a few days before, which was not cured as quickly as this one. My experience is limited in the use of both remedies, and I mention this case hoping that others who have not employed the manganic compound may test its usefulness. Perhaps a stronger solution than that which I used might be applicable to older cases.

F. T. Fry, M. D.

Quinnemont, W. Va., July, 1875.

Damiana.

Mr. Editor,—I desire to give to your readers the *finale of* the case reported by me in the July No. of the *Monthly*, viz: the case of Mr M. aged 55, treated by the new aphrodisiac, damiana.

Mr. M. has now been married some two months. He returned from his wedding tour some weeks since, and reports that the functions of the organs have been restored to all the vigor of early manhood—asserting positively that he has had the *desire*, as well as the capacity of having coition as often as every night for two successive weeks.

This remarkable result has been obtained by the use of less than one dozen bottles of the fluid extract. I will add that he regards the medicine as a very excellent general tonic.

This case I think somewhat remarkable when we take into consideration the gentleman's age, the long time which elapsed since the function became impaired, and the efforts made by two physicians of skill and experience, who used phosphorus, strychnia, etc., without perceptible benefit.

J. W. Van Arnum, M. D.

Washington, D. C., July, 1875.

Original Translations.

(From *Medicinisch-Chirurgische Rundschau*, June, 1875.) By Rev. Dr. A. S. B., Richmond, Va.

Doses of Certain Remedies for Hypodermic Medication. By Prof. von Schroff, Jr.

If it is intended to give an accurate dose, it is first necessary to know the exact capacity of the syringe to be used. To this end, it will suffice, once for all, to find out the real weight of the syringe, on a delicate and correct scales, before the instrument is filled, and compare the weight after it is filled with distilled water—the average temperature of which should be 15°—17°C. (59°—62.6°F.) Thus we get the capacity of the syringe for distilled water at a given temperature, and are enabled thereby to make precise calculations for other liquids, which differ greatly from distilled water in specific weight. Experience tells us how unreliable is the measure of syringes—even of those which are made by the best manufacturers; and as the precisest exactness is often necessary—especially in the administration of heroic remedies—the above recommendation concerning the correction of the capacity of the syringe in a plain and easy way will be appreciated.

We annex a table of certain articles for a syringe that is divided into ten equal parts [of one line each], and the full capacity of which syringe is exactly one gramme of distilled water. From this table, larger or smaller proportions can be easily calculated:

Sulphate of Atropia.—Dissolve .06 gramme [$\frac{9}{10}$ grain] of atropia in 30 grammes [493.2 minims] of water [about 1 grain atropia to f℥ix of water]. One syringeful of the solution contains .002 gramme [about $\frac{1}{32}$ grain] of atropia. The tenth part of a syringeful [one line], therefore, contains .0002 gramme [$\frac{1}{320}$ grain] of atropia. If, for instance, it is intended to inject .001 gramme [$\frac{1}{64}$ grain] of atropia, inject 5 lines, or one half of the syringeful.

Aconitia.—Make a solution of 1 gramme [about $1\frac{1}{2}$ grains] of aconitia—made soluble by the addition of a few drops of a solution of an acid salt—in 10. grammes [164 minims] of water. One syringeful contains .01 gramme [about $\frac{1}{6}$ grain] of aconitia. One line of the syringeful represents .001 gramme [$\frac{1}{60}$ grain]. Inject from 2 to 5 lines [$\frac{1}{30}$ to $\frac{1}{12}$ grain] of aconitia.

Solution of (Caustic) Ammonia.—Two grammes [about ʒss] should be diluted with about 3 times its amount of distilled water. It is the remedy to be employed in aconite poisoning (Richardson); in cases of chloroform narcosis (Neild); and for the bites of snakes, &c. (Bettelheim).

Nitrate of Silver (Crystals).—Dissolve 1 gramme [grain iss] in 200 or 300 grammes [f℥viss or x] distilled water. It is used as an injection in cancerous tumors. Inject one or two syringefuls; and immediately afterwards inject an equal amount of a solution of cooking salt, [of the strength of about 1 grain to ℥ij distilled water].

Hydrochlorate of Apomorphia.—Always use a freshly prepared solution. Dissolve .06 gramme [$\frac{9}{10}$ grain] in 6 grammes [about f℥iss] of distilled water. Inject from 7 lines to a syringeful [about $\frac{1}{20}$ to $\frac{1}{15}$ grain of apomorphia].

Bromine.—Used in hospital gangrene. Dissolve one part in twenty parts of water. Inject around the gangrenous sores at distances of one-half to three-quarters of an inch apart.

Camphor.—Dissolve 1 part in 12 parts of alcohol. Inject

one syringeful, which contains .12 gramme [about $1\frac{1}{3}$ grain] of camphor. It is used as an excitant in collapse, cholera, &c.

Carbolic Acid.—Dissolve 1 part in 200 or 1000 parts of water or oil. Inject one syringeful [from $\frac{1}{12}$ to $\frac{1}{60}$ grain of the acid]. Recommended in parenchymatous inflammations, diphtheria, &c.

Sulphate and Muriate of Quinia.—Dissolve 2 grammes [ʒss] by the aid of 1.4 grammes [about 20 minims] of hydrochloric acid, in enough distilled water to make 8 grammes [about fʒij]. One syringeful represents .25 gramme [about $3\frac{3}{4}$ grains] of quinia. Still better than the sulphate, for hypodermic use, is the muriate of quinia, in the above proportions, because it is more soluble in water.

Chloral-Hydrate.—Dissolve 5 grammes [about ℈iv] in 5 grammes [a little less than fʒiss] of distilled water. One to four syringefuls [grains xv to ʒi chloral] may be used at a time. It causes a local though a mild inflammation

Muriate of Codeia.—Dissolve .05 gramme [about $\frac{3}{4}$ grain] in 6 grammes [a few minims more than fʒiss] of distilled water. A syringeful contains .0083 gramme [about $\frac{1}{16}$ grain] of codeia. Inject 6 lines, .0048 grammes [about $\frac{1}{27}$ grain] of codeia.

Caffeine, Pure, and *Citrate of C.*—Dissolve 5 grammes [$7\frac{1}{2}$ grains] in 5 grammes each [$\overline{aa}$ about 85 minims] alcohol and distilled water. One line of the syringe represents .005 gramme [about $\frac{1}{13}$ grain] of caffeine. Inject from 3 lines to 1 syringeful [from $\frac{1}{4}$ to $\frac{3}{4}$ grain].

Digitalin.—Dissolve .06 gramme [$\frac{9}{10}$ grain] in a mixture of alcohol and distilled water, $\overline{aa}$ 3 grammes [about 50 minims of each]. One line of the syringe contains .001 gramme [about $\frac{1}{65}$ grain] of digitalin. Inject from one-half to one line [$\frac{1}{130}$ to $\frac{1}{65}$ grain of digitalin].

Emetin.—Now unnecessary, that we have apomorphia.

Aqueous Extract of Opium.—Dilute with an equal amount of distilled water. Take, for instance, 3 grammes each of the aqueous extract of opium and of distilled water. Inject from $\frac{1}{2}$ to $1\frac{1}{2}$ lines, representing .025 to .075 gramme, [$\frac{2}{5}$ to $1\frac{1}{5}$ minims].

Extract of Ergot (*Ergotin*).—Dissolve 2.5 grammes [about ℈ij] in 7.5 grammes each [about ʒij $\overline{aa}$] of alcohol and glycerine. Inject from $\frac{1}{2}$ to 1 syringeful [about 1 to $1\frac{3}{4}$ grains].

Bichloride of Mercury (*Corrosive Sublimate*).—Dissolve .25 gramme [about gr. iv] in 30 grammes [about f℥i] of water. Inject 9 lines [about $\frac{1}{50}$ grain], or at most $\frac{1}{6}$th of a grain.

Iodide of Potassium.—Dissolve 5 grammes [about ℈iv] in 15 grammes [about f℥ss] of water. Inject one syringeful, containing 2 gramme [grains iij] of the iodide of potassium.

Acetate, or better, *Muriate of Morphia.*—Dissolve 1 gramme [gr. iss] in 5 grammes [a little less than f℥iss] of water. (If the acetate of morphia be used, add one drop of dilute acetic acid). A syringeful represents .02 gramme [$\frac{1}{3}$ grain] of morphia. Inject from $\frac{1}{4}$ to 1 syringeful [$\frac{1}{12}$ to $\frac{1}{3}$ grain of morphia].

Hydrochlorate of Narceia.—Dissolve .06 gramme [$\frac{9}{10}$ grain] in 4 grammes [f℥i] of water. (Make the solution warm before using it, as otherwise a part of the salt will crystalize). One syringeful contains .015 gramme [about $\frac{1}{5}$ grain] of narceia. Inject from 7 lines to 1 syringeful [$\frac{1}{16}$ to $\frac{1}{5}$ grain] or even more if circumstances require.

Nicotin.—Dissolve .02 gramme [$\frac{1}{3}$ grain] in 5 grammes [a little less than f℥iss] of water. One line of the syringe contains .0004 gramme [$\frac{1}{150}$ grain of nicotin]. Inject $2\frac{1}{2}$ line, equal to .001 gramme [$\frac{1}{60}$ grain of nicotin].

Nitrate of Strychnia.—Dissolve .1 gramme [gr. iss] in 10 grammes [f℥iiss] of water. One syringeful contains .001 gramme [$\frac{1}{65}$ grain] of strychnia. Inject 1 to 6 lines, equal to .001 to .006 grammes [$\frac{1}{65}$ to $\frac{1}{11}$ grain] of strychnia.

Tincture of Cannabis Indicis.—Dilute with an equal quantity of water. Inject from 3 to $7\frac{1}{2}$ lines, (equal to $2\frac{1}{2}$ to 6 minims of the tincture.)

Veratria.—Dissolve .05 gramme [$\frac{3}{4}$ grain] in 5 grammes $\overline{aa}$ [a little less than $\overline{aa}$ ℥iss] of dilute alcohol and water. Inject $2\frac{1}{2}$ to 6 lines [$\frac{1}{50}$ to $\frac{1}{20}$ grain] of veratria.

Hypodermic Use of Purgatives.—By means of subcutaneous injections of purgatives, e. g., .10 gramme of sulphate of magnesia dissolved in one gramme [about 16 minims] of water, Luton (*Bull. de la Soc. Med. de Reims*) has succeeded in producing evacuation of the bowels. According to this author, the subcutaneous use of purgatives has proven to be the best means of affording relief in vomiting due to cancer of the stomach, in

dyspepsia, vomiting of pregnancy, and that due to sea sickness and in ileus.

Salicylic Acid in Diphtheria.—Dr. Fontheim has treated 31 patients of diphtheria with salicylic acid. The severest cases were cured after eight days' treatment; the milder ones after 2, 3, and 4 days. Of the 31 cases, none died. There occurred no cases of diphtheritic inflammation of the kidneys, nor were there any cases of paralysis of the palate. In the severe cases, Dr. F. ordered the affected parts to be rubbed, every three hours, with a sponge, dipped in a solution of salicylic acid, and to take as regularly, a teaspoonful of the same solution. The formula used was ℞. Salicylic acid, 2. grammes [about ʒss], Fountain water 200. grammes [about ℥vij], Alcohol, q. s. [to make f℥vij]. Salicylic acid passes rapidly into the urine, and gives, with chloride of iron, a blue or violet reaction.

Snow as a Dressing for Wounds, and Hemostatic in Surgery. Dr. O'Hasser recommends for certain operations—especially in tracheotomy—that instead of sponges, freshly fallen snow should be applied to the parts. It absorbs the blood splendidly, acts as an astringent upon the blood-vessels, and as an anæsthetic upon the nerves. The snow should be loose.

Bromide of Potassium in Epilepsy.—Dr. Otto has had an opportunity for testing the value of bromide of potassium in 33 cases of epilepsy. *Fourteen* were cured soon after commencing the remedy; *two* others suffered with only slight swoons; and *three* others were cured after taking increased doses. Of the 33 cases treated, the percentage of results was 75 per cent. cured; 25 per cent. improved; without benefit, 0. The largest dose given was 8 grammes to 15 grammes—[from ʒij to nearly ℥ss]. The disadvantages of the use of the bromide of potassium are well known; and Otto has observed them. The question is, is the bromine or the potassium the cause? Otto decided in favor of the bromine.

Proceedings of Societies.

RICHMOND ACADEMY OF MEDICINE.

July 1*st.*—Dr. Edwards reported a case of

Vaginal Hemorrhage in a Colored Child Four and a Half Years Old, which had occurred at three successive monthly pe-

riods—lasting from 2½ to 3 days each. The total amount of blood lost was inconsiderable, nor was there any development of the parts as indicative of puberty. There was no evidence of pain or soreness. The mother thought her child was menstruating. Was there any connection between this hemorrhage and ovulation?

Poisoning by Boiled Custard(?)—Dr. J. S. Wellford read letters from Dr. W. G. Rogers, of Charlottesville, Va., detailing particulars of the supposed cases of poisoning from drinking boiled custard, which occurred there May 11th. There was no evidence or even suspicion of criminality whatever. The custard was made on Saturday morning, May 8th, and was seasoned with vanilla. A portion of the custard was sent to an old lady, who, however, being too ill to eat it, gave it to a colored woman, Caroline Dunbar, who nursed her on the night of 10th of May. From the maker of the custard, Dr. Rogers was informed that the portion she retained was "sour and turned" on Sunday evening—it having been kept without ice. That portion of the same sent to the sick lady on Sunday morning, and a part of which Dr. Rogers' son (about 10 years old) got on Monday and the colored person on Tuesday morning, had probably undergone fermentation, for Dr. R's son says it was "bitter, sour and unpleasant" to the taste, but he drank it for the sake of "politeness."

On the morning of 11th inst., Caroline Dunbar carried the custard given her (rather less than a pint) to her home, and gave it to her daughter, Clarissa, who in turn gave the greater part of it to her son, about two years old. The remaining portion was eaten by Clarissa and another colored girl about 6 years old. Caroline being absent at the time, Clarissa reports that in less than a half hour (between 7 and 8 o'clock A. M.) her son was attacked with violent vomiting and purging, severe pain in the stomach and bowels, the discharges from which were copious, watery, and contained much mucus, but no blood. A short time after her son became ill, both she and the girl were affected in the same way, but less severely. Caroline returned in a short time, and found the boy (a light mulatto) "blue, cold, and almost dead." She had just taken him from a warm bath when Dr. Rogers arrived—probably an hour after the attack commenced. Dr. R. found the boy pale, livid, cold, with scarcely perceptible pulse, which, however, was irregular and frequent—about 200 per minute; with difficult and frequent respiration, and making ineffectual efforts to vomit; there was also excessive and continued thirst. Large mustard poultices were at once applied to the abdomen, epigastrium and breast, and albumen, in the form of whites of eggs, beat up with water, was freely

given, with a little whiskey repeated in small quantities; also 2 gr. doses of Dover's powders were repeated two or three times. In half an hour, the increased warmth and diminished lividity of the surface and less obstructed respiration, indicating an improved oxygenation of the blood, and the more developed and less frequent pulse, gave some hope of recovery; but in two or three hours the symptoms of collapse gradually returned, and the child died about 10 hours after he was attacked. The mind remained unaffected to the last; the pupils retained their natural appearance; and there was no apparent irritation of the mouth or throat.

Clarissa and the girl got the same treatment, and were convalescent in 48 hours, but were much prostrated for several days.

Dr. Rogers' son, soon after taking the custard on the 10th, had symptoms of violent cholera morbus, which passed off in about 24 hours, leaving him much worsted for several days.

The custard was ascertained to have been cooked in a tin vessel, and was eaten of on the following day (9th) by others without bad effect.

As none of the custard was left, and as the stomach and bowel discharges were not saved, a *post mortem* examination was made of the boy about 24 hours after death, by Drs. W. C. Dabney —— Nelson, of Charlottesville. The contents of the stomach were analysed by Dr. Dunnington, Adjt. Prof. Anal. Chem., Univ. of Va. The *post mortem* revealed irritation or inflammation of the gastric mucous membrane, but no erosion or ulceration; also signs of intestinal irritation, and some inflammatory congestion of the lungs. The right side of the heart was full of blood, while the left contained but little. Dr. Dunnington, however, "found sufficient mercury in that portion of the contents of the stomach analysed, which, if it existed in the form of corrosive sublimate,* would amount to from .035 to .05 of a grain—sufficient to cause death—especially when we consider that a part of the contents of the stomach was not analyzed, and that, too, a part of the poison may have been thrown up. The great dilution of the poison is sufficient to account for the absence of erosion of the stomach, and the natural appearance of the mouth and of the throat, and the early death of the patient, will account for the normal state of the salivary glands, which are rarely, if ever, affected before the expiration of 24 hours after absorption of the drug"—supposing the hypothesis be correct that corrosive sublimate was the cause of death in this case.

*Whether the mercury existed in the stomach in the form of calomel, corrosive sublimate or other compound, Dr. D's analysis does not decide.

"There being no evidence that the boy had taken any form of mercury previous to or after taking the custard, the verdict of the coroner's jury was 'Poisoned by mercury.'" But if mercury existed in the custard, there is no clue as to how it got there."

But the facts that the custard was partaken of on the 9th without injury to any one, while it was "bitter, sour, and unpleasant to the taste" on the 10th, and produced symptoms of cholera morbus in Dr. Rogers' son within a short while after taking it on that day [without leaving any of the other prominent symptoms of mercurial action—a fact which is worthy of note, had the custard contained so much mercury as to produce death in another case—ED.], strengthen the probability that a poison was generated by the fermentation of the milk and other constituents of the custard—possibly buttyric acid." "If it be true that corrosive sublimate, when it causes death, *always* acts as a *local irritant*, then I [Dr. Rogers] should agree with you [Dr. Wellford] that the boy died, not from mercury, but from a poison generated by fermentation of the custard."

"But," Dr. Rogers thinks, "toxicologists say that *exceptionally* death is produced by corrosive sublimate, without leaving signs of local irritation sufficient to account for death—acting either by a depressing or paralysing effect upon the heart or otherwise. If this be so, the poisoning may have been caused, as the coroner's jury decided, by the mercury."

Dr. Wellford, after reading the letters of Dr. Rogers, compared the symptoms and effects, as detailed, with those he had met with in a set of cases last year, and reported in the *Virginia Medical Monthly*, August, 1874. He stated that he considered this subject of very great importance in its dietetic, medico-legal and practical point of view. He believed that a great many such cases occurred which were frequently attributed to criminality. In this case, he thought the verdict of the coroner's jury was entirely incorrect, as the symptoms, to his mind, were not those of mercurial poisoning, but of some substance produced by the decomposition of caseous matter in the milk. He reported this case for the purpose of obtaining as many of them as possible, so that they might be carefully studied. The results of the decomposition of milk, especially the caseous portion, are more important than most physicians believe. Buttyric acid, one of the products of caseous decomposition, would account for all the symptoms in this case, and which are similar to poisoning sometimes produced by eating cheese. This subject acquires additional importance at this time, in his opinion, because he regards the symptoms of cholera infantum in many

cases as only the results of milk given to the child in a state of incipient decomposition, which may not be at all perceptible to the most acute adult organs. He could not find in any chemical work at his disposal any satisfactory description of the fermentation of milk, and therefore he had not reached a consistent explanation of what was the exact substance which produced the symptoms narrated by Dr. Rogers in his case, nor those related by him to the Academy last year; but he was convinced that in many cases of cholera infantum, he had been able to relieve his little patients by adopting the very simple plan of allowing the milk to settle, and the caseous matter to subside to the bottom, and only using the upper portion containing the oleaginous and fatty matters, while the greater part of the caseous was removed. In Dr. R's case, he had no doubt that there was some mercury found in the child's stomach, but he did not think the symptoms were sufficiently, by Dr. Dunnington's very satisfactory analysis, marked to justify a diagnosis of acute irritant poisoning such as would be caused by mercury, when death so soon occurred without any symptoms of constitutional action. He would accomplish his object, however, if the attention of physicians was called to the subject, and they could be induced to report the cases, which, he believed, were more frequent than generally thought.

Drs. O. Fairfax and Parker both attested the liability of ice cream, especially when flavored with vanilla, to cause cholera morbus, or, at least, considerable purgation, attended by abdominal cramps.

Mumps.—Dr. H. W. Davis mentioned a case of mumps, in which double orchitis by metastasis occurred.

Dr. C. Macgill stated that many cases of death occurred at Fort Donaldson during the war from suppurative orchitis, due to mumps. His local treatment was to keep the testes well covered, and to apply mercurial ointment, or a saturated solution of ammonium chloride.

Dr. W. W. Parker guards his mump patients from exposure. For orchitis, he leeches.

Dr. Edwards reported a case in which metastasis to the membranes of the brain occurred—fatal. He thought the new remedy, jaborandi, might prove of service in cases of metastasis.

Dr. O. Fairfax thought bleeding indicated where metastasis to the brain occurs.

Dr. C. H. Perrow, regarding the cerebral metastasis as inflammatory in character, agreed with Dr. Fairfax.

Dr. J. S. Wellford does not think mumps an inflammatory affection, since *suppuration* of the parotid gland is extremely rare.

He thinks it probable that metastasis is due to a reflected nervous action.

Dr. F. D. Cunningham thinks mumps must be dependent upon some poison which peculiarly attacks white fibrous tissue. It is curious that metastasis skips glands having the same general outline resemblance to the parotid (the sublingual, submaxillary, the pancreas, &c., but in these fibrous membranes are less developed) and attacks the testes, the mammæ, and the dura mater, the fibrous tissues of which, however, are more exactly like that of the parotid gland in character.

Dr. F. B. Watkins referred to the known relationship existing between the testes and the throat, as shown by the effects of emasculation. He thinks metastasis due to nervous reflection.

Dr. Cunningham remarked that the parotid glands belong to the digestive apparatus, and are governed, as also the testes, by the sympathetic system, while the vocal organs are controlled by cranial nerves; but the testes belong to the reproductive system.

Dr. C. Tompkins advocated blistering the testes in orchitis.

Dr. Watkins thinks blistering the scrotum rather dangerous. He knew of a physician who had to pay heavy damages, as a result of a suit for malpractice, to a man whose testicle was lost after just such treatment.

Dr. Parker had known the application of tincture of iodine to the scrotum of a scrofulous subject to produce violent inflammation.

Dr. Tompkins thought that in such cases there must be some constitutional vice.

Dr. Cunningham said one mode of blistering for orchitis had not been mentioned, viz: over the femoral artery. His usual treatment, however, was the administration of tartar emetic, and the application of leeches to the testicle. Puncturing the tunica albuginea affords much relief where the pain is severe.

Dr. H. H. Levy obtains satisfactory results in orchitis from rubbing the scrotum with, and keeping constantly applied to it, an ointment composed of extract of belladonna, iodide of potassium and glycerine.

Dr. W. Augustus Lee had effected resolution of orchitis in one case by application of a 40-grain solution of nitrate of silver. He gave also tartar emetic. The same treatment failed in another case.

July 15.—Dr. Macgill reported a case of Lacerated Wound over the Patella which resulted in **Tetanus Without Trismus(?)** A child, 3 years old, received such a wound on 12th ult., which was repeated on 19th. On 26th, there were extreme pain, opis-

thotonos, and all other symptoms of tetanus except trismus. Chloroform by inhalation, morphia, and potassium bromide, internally, chloral hydrate by enema, blister to back of neck, and opium and ammonium chloride to the wound, were the remedies used, and the case got well, though for five days the child was unconscious.

Dr. Robinson reported a case that was at first supposed to be one of cerebro-spinal meningitis, but which he now thinks one of tetanus without trismus. The boy, æt. 14 years, received a slight wound of the heel, which resulted in suppuration, but healed. There were marked post-cervical and abdominal contractions, which were excited by the merest touch; consciousness was perfect; though the pain was unendurable, and death resulted on the fourth day after the attack. There was obstinate constipation, which caused the doctor at first to suppose that it was a case of colic due to obstruction. Neither the opisthotonos nor the abdominal pains were controlled by chloral or chloroform.

Dr. Parker reported a case very much like Dr. Macgill's, but the patient died, He does not think the cases reported by Drs. Macgill and Robinson cases of tetanus, as he regards trismus an essential symptom in this disease. He thinks they were probably cases of pure spinal meningitis, in which there is wonderful sensibility of surface. He knew of only two cases of tetanus that had occurred in Richmond during the past 25 years that had been cured.

Dr. Macgill knew of 4 cases that had been cured.

Dr. H. W. Davis had seen 3 cases—2 in human subjects—1 of which recovered, and 1 in the horse, which also recovered—all treated by chloroform.

Dr. Edwards, in reading reports of recoveries from cerebro-spinal meningitis, has often been struck with Dr. C. B. Radcliffe's remark in Reynold's *System of Medicine*, in substance, that there are exceedingly few recoveries from spinal meningitis. This, coupled with the notoriously fatal character of basilar meningitis, has led him to doubt the correctness of diagnosis in many cases of recoveries from cerebro-spinal meningeal *inflammation*, which must produce organic lesion, according to the best authorities. Mere congestion or irritation may occur without leaving unhappy sequelæ. He argued, from the symptoms as detailed by Drs. Macgill and Robinson in their cases, that true inflammation had not occurred. Authors recognize the occurrence of tetanus without lockjaw, and he thought it probable that the cases reported were of this class.

Dr. O. Fairfax saw the case reported by Dr. Macgill. He

thought it one, not of tetanus, but of cerebro-spinal irritation or inflammation. If chloroform produces death by indirectly causing anæmia of the brain, he thought it might prove of double service in cerebral inflammations by lessening the amount of blood sent to the head, while it at the same time might give relief from pain.

Dr. J. S. Wellford remarked that chloroform acted upon the amount of blood in the brain by paralyzing the muscular contractility of the heart. He stated that a physician of Glasgow had obtained 12 recoveries in 19 cases of tetanus by the use of calabar bean. It should be used to its full extent.

Dr. Parker remarked that the *post mortem* of the only case of death from chloroform he had seen revealed intense cerebral congestion.

Dr. Edwards, in reading a report in Transactions New Jersey Medical Society, was struck with the statement that certain localities are entirely free of cases of tetanus, while in certain other communities almost any wound of the extremities, it would seem, resulted in tetanus. Reports regarding nitrite of amyl in tetanus are very encouraging.

Dr. Wellford said tetanus was very rare in agricultural districts. His experience while practising at Fredericksburg, Va., showed that it was exceedingly rare in that section of the State.

Dr. Macgill saw no case during the war.

Dr. J. M. Payne was connected with hospitals in Richmond two years of the war, but saw no case of tetanus.

Chloral in Cholera Infantum.—Dr. Parker had used chloral by enema in two cases, with success, where nothing could be retained on the stomach. In a third case in which he used it, he believes the child would have been cured had it not been so completely exhausted when he began the treatment. As it was, there was marked amelioration of all the symptoms. In one of the cases, the parents were sure the child—8 months old—would die under any treatment; but an enema of grains iij—iv of chloral checked vomiting, relieved the head symptoms, and produced a calm sleep of five hours. On awaking, the child was much better, and rapidly recovered.

The subject of *Insanity* was discussed by Drs. Watkins, Parker, Wellford, M. M. Walker, Macgill, Davis, Joynes, Tompkins, Edwards, and C. H. Perrow—without, however, developing any new suggestions, though confirming the importance of early treatment, and the value of Asylums as the proper place for carrying out the treatment, &c.

The Cinchona Cultivation in Jamaica, it is stated, will prove successful.—*Phar. Gazette.*

MEDICAL AND SURGICAL SOCIETY OF BALTIMORE.

June 3d, 1875.—**Treatment of Displacements of the Uterus.** Dr. A. F. Erich read a paper on this subject, and advocated the following points: (1) While there are certain cases of uterine displacement, the reduction of which ought not to be attempted, there are many that do require mechanical treatment. (2) The uterine sound or repositor should not be used in correcting any of the malpositions of the uterus. (3) Abdominal supporters have a tendency to increase the downward pressure in the pelvis. (4) No direct pressure against the os ought to be made by any pessary. (5) Anteversion can be corrected by simply drawing the cervix forward, without any direct action upon the body of the uterus. To accomplish this by means of a pessary, we have to act upon the anterior wall of the vagina so as to shorten it, which may be done by causing it to double upon itself, by a pessary placed between the uterus and pubis. The same pessary used for retroversion, bent in the shape of the letter U, leaving, however, the posterior end a little longer than the anterior, is all that is needed for the purpose. By increasing or diminishing the curve of the pessary, we regulate the amount of traction made by it. The posterior or long end of the pessary should rest upon the perineum, while the anterior end presses against the anterior wall of the vagina—the two ends pointing forward, and the bent lying close to the cervix. (6) Retroversion can be corrected by drawing the cervix back into the hollow of the sacrum. Place the posterior end of the pessary behind the os, thus drawing the cervix back into the hollow of the sacrum by traction made upon the posterior wall of the vagina. (7) Pessaries for anteversion must not extend behind the os. (8) In procidentia, when an ordinary retroversion pessary cannot be retained, Zwanck's pessary should be tried, and if that fails to keep the uterus within the vagina, Erich's procidentia pessary is indicated. (9) The great desideratum in the mechanical treatment of uterine displacements consists in pessaries that may be shaped and moulded at the bedside, to meet the requirements of the case. (10) Dilatation of the cervix by means of sponge-tents softens its tissues and facilitates the relief of flexions. (11) Intra-uterine stems are retained by the posterior wall of the vagina lying in contact with the os, and require no special means for their retention. (12) Sponge-tents should be very slightly, if at all, tapering. (13) Flexible sponge-tents can be made by carefully manipulating ordinary tents between the fingers.

Dr. John Morris said that 30 years ago he never saw a pessary used in this city, not because they were unknown, but be-

cause their use was not considered essential. As for a virgin having a displacement of her uterus, it was considered a disgrace; an evidence of her want of virtue. If the treatment of displacements was confined to therapeutical means alone they could do no harm, but vast harm may result from the injudicious use of pessaries. Displacements of the uterus are frequently congenital; in the virgin, the position is one of slight ante-version, and if we seek to correct it, we do harm. Uterine displacements are the effect of extreme violence. The great fault of Dr. Erich's paper is that it does not once mention therapeutic or hygienic means, but relies solely on pessaries for the cure of uterine displacements and of hyperæmia, congestion, etc., attending them. Dr. Atlee says he can treat successfully a greater number of displacements of the uterus by therapeutical measures than by pessaries. We must treat the cause, and not the effect. In the virgin, he has seen both ante-versions and flexions, but these can only occur through physical violence, impaired general health, the uterus taking on the weakened condition, and what Baker Brown terms delection or secret vice, and none of them can be rectified by means of a pessary. There are few conditions in which Dr. Morris admits the value of pessaries; in procidentia and prolapse he has been in the habit for the last seven years of using a pessary similar to the one described by Dr. Erich, and the results have been satisfactory. Lateral displacements of the uterus are almost impossible, except from ovaritis or cellulitis, and the dragging down of the uterus. It is very fashionable of late years to talk about displacement of the ovary, and in this connection he mentioned a case to illustrate the difficulty of diagnosing it. He attended a lady for some obscure uterine trouble, and was unable to relieve her. He then took her to New York to consult Dr. Fordyce Barker. On first seeing the case, he suspected displacement of the ovary, but after a careful examination, aided by Drs. Sims and Nott, he failed to detect it. Dr. Nott was then inclined to attribute the trouble to the coccyx, and proposed removing it; but he is happy to state that, although still a sufferer, she is in possession of her coccyx. If the ovary is very large it might be possible to detect it *per rectum* in very thin subjects. He has never been able to detect it.

Dr. H. R. Noel remarked that he has met with two cases of displacement of the ovary. The patients were thin, and by introducing the fingers into the vagina, conjoined with pressure in the region of the ovary, he was able to roll it between his fingers. He was convinced that he felt the ovary from the sense of sickness and depression of the stomach produced, similar to that resulting from forcible pressure on the testicles.

Dr. Morris said women will complain of the same sensations when applications are made to the os. In women who have borne no children the cervix is the part most likely to be diseased; in multiparous, the body will be the seat of engorgement. In cases of uterine displacement, associated with a general bad health, leucorrhœa, dysmenorrhœa, enlargement of the uterus and cervical engorgement; thus occluding the passage of spermatozoa, and rendering it impossible for fecundation to take place. Baker Brown recommends slitting the cervix, the keeping open of the cervical canal, hoping thereby that pregnancy may take place. Hyperæmia of the uterus is different from hyperæmia in other organs; it is a hyperæmia, so to say, *peculiar* to the uterus. If there is no inflammation or engorgement of the uterus, there will be no interruption of the circulation, and he cannot see the advantage of the use of pessaries on that ground. Pessaries are not only objectionable on account of their failure to cure, but because of the injury resulting from their use. That they may be productive of disease we have illustrations in granular erosion, the troublesome excoriations, etc., that often result from their use. No pessary should be used that impinges against the cervix. In regard to the uterine sound, he does not think its use is attended with as much danger as Sims and others are inclined to think; still the uterus should not be replaced with the sound or repositor, but by manipulations in the knee and elbow position. In his paper read before the recent meeting of the American Medical Association, at Louisville, in which he took grounds against the use of pessaries, the question was asked why he did not suggest some treatment for the displacements of the uterus. He will here remark that he did not consider the occasion appropriate for doing so. He has great confidence in blood-letting, and it is his main remedy. He does not use the leech because it is difficult to apply, but prefers the artificial leech. Two or three ounces of blood should be drawn at the first application, and repeated if occasion calls for it; and as soon as the engorgement is relieved, the uterus will resume its normal position. To those who have never drawn blood from the cervix, it will be surprising to see the beneficial results derived from drawing a few ounces of blood. The portal system often has a great deal to do in causing engorgement and displacement of the uterus, and should receive its appropriate treatment. For this purpose, he gives occasional purgatives, and regulates the bowels with a dinner pill containing Barbadoes aloes gr. ij, ext. nucis vom. gr. $\frac{1}{2}$, ext. rhei. gr. j, gum mastich q. s. Muriate of ammonia gr. xv—xx ter die, hip-baths, cold douche, etc., are useful. The muriate of ammonia is a favorite

prescription with the German physicians; also with Dr. Atlee, of Philadelphia. Large cotton pessaries soaked in glycerine meet all the indications usually sought to be gained by the ordinary pessaries, and are not productive of injury. Abdominal supporters are, as a rule, useless, and should only be used in fat, flabby women, in whom they may do good by relieving the uterus of the superincumbent weight.

Dr. Arnold said that, according to his experience, he does not place much confidence in the use of pessaries; that although the prejudice against their use is often due to their ill effects or inefficiency; still, he is willing to admit that it often results from errors of diagnosis and their unskilled application. He is persuaded that the extensive use of pessaries at the present day is due to the failure of the older practitioners to relieve dysmenorrhœa. We owe to them the prevalence of gynæcology, its varied appliances and many important results. Out of every 50 cases of diseases of the uterus which came to him for treatment 45 come for the relief of displacements. He will not dispute the fact that general treatment will cure a certain number of cases, and he can conceive of mechanical treatment that will cure; but, in a majority of cases, treatment fails to effect a cure. Anteversions and retroversions, unattended by troublesome symptoms, require no treatment. Displacements often result from morbid causes, such as subinvolution, pelvic exudations, tumors, etc.; here we must treat the cause and not the displacement, which is only a secondary result. Retroflexion of the uterus, when accompanied by dysmenorrhœa or chronic uterine catarrh, would seem to suggest mechanical interference. In cases of procidentia uteri or prolapse, in old women, or where the uterus is enlarged from morbid growths, subinvolution, etc., there may be benefit in supporting the uterus. He thinks the pain of dysmenorrhœa due to the same cause that produces it in parturition. He does not regard the sound of value in the treatment of displacement, but it is at times of diagnostic value. His principal reliance is on local treatment, as free scarification of the cervix, vaginal injections and hip-baths. Contrary to Dr. M., he stated that the German physicians are in the habit of using the iodide of potassium, and the bromide of potassium for the relief of engorgement of the uterus.

Dr. Erich agreed that harm has been done by pessaries, but it is the injudicious and unscientific use of them that results in injury. Harm has been done by splints, mercury, etc., but we do not condemn the remedies, but the ignorant use of them. For the proper application of pessaries, one must make himself perfectly familiar with the anatomy of the uterus, and the mechan-

ism of their application. Uterine displacements, as long as they produce no discomfort or sterility, require no interference. His experience goes to show that anteversion, as well as retroversion, is frequently accompanied by the characteristic symptoms of prolapsus uteri, as painful sensations of weight, and dragging in the pelvis, rectal and vesical irritation, etc. Without entering into the question whether congestion, inflammation and subinvolution of the uterus are the effect or the cause of displacement, still he thinks the uterus must be properly replaced; by which means it is hoped to restore the impeded uterine circulation to its normal condition. The question may be asked, How do pessaries relieve displacement? If we use a pessary in a displacement associated with engorgement of the uterus, its action is to elevate and give support, on the same principle that we elevate a varicose limb. In an acute flexion, the uterus is bent upon itself, the circulation is impeded and congestion of the uterus, obstructive dysmenorrhœa, and a series of unpleasant symptoms result. Now, to relieve it, it becomes necessary to correct the shape of the uterus, and to remove the kink in the uterine vessels. Retroversion and anteversion must be preceded by descent. The uterine ligaments become elongated and relaxed. Now, by holding the womb in its normal position for a few months, they are allowed to contract, and if the cause can be removed, the case will result in a cure. Pessaries must be flexible, and properly applied and adapted at the bedside. If experience did not demonstrate their utility, he thinks analogy would. In cases of sterility, with displacement and occlusion of the cervical canal, even if there are no other bad symptoms, he corrects by the aid of a pessary, and often pregnancy and a complete relief will follow. The utero-sacral ligaments frequently assist in the production of anteflexion. The cervix, from its firm supports and low position in the pelvic cavity, is held secure, while weight is applied to the fundus, and the bending of the organ results. Anteflexion in virgins should only be treated when causing obstructive dysmenorrhœa. Then dilate the canal by means of sponge-tents, and keep it open by means of an intra-uterine stem. This treatment, if persisted in for several months, will relieve the pain at the menstrual period. In acute flexions, it is at times extremely difficult to introduce a sponge-tent; here, by manipulating the tent between the fingers, it becomes flexible, and its passage is facilitated by following the course of the bent canal. He is fully convinced that an overloaded rectum or distended bladder cannot produce retro- or anteversion or flexion. The sound should only be used to feel the direction of the cervical canal, and never to replace a displaced

uterus. Uteri not bound down by adhesions can be readily replaced with the hand, and if adhesions exist, the use of the sound must result in positive injury.

The best method of diagnosis in prolapsed ovary, consists in dilating the urethra, and inserting the finger of one hand into the bladder, and that of the other into the rectum.

Abortion from Apoplexy of the Ovum.—Dr. Arnold exhibited the specimen and gave the history of the case: A healthy and plethoric woman had missed her menses twice. She was taken with headache, weight in the hypogastric region, slight hemorrhage, and after some expulsive pains, the ovum was expelled with the secundines intact. Upon opening the cavity of the sac it was found to be empty. Whether the fœtus had escaped or dissolved in the amniotic fluid, he is unable to state. The pregnancy had not advanced beyond the third month, because the tufts of the chorion had not disappeared from the placenta. The whole chorion exhibited numerous cysts filled with blood—apoplexy of the ovum. The specimen represents a very rare cause of abortion, and is the second one of the kind he has seen. Treatment in these cases depends upon an early diagnosis of the case. Dragging and heaviness in the region of the uterus, together with plethora and fullness about the head, are mentioned as diagnostic.

Dr. Morris said, that in this case, taking into consideration the absence of the fœtus, might it not have been one of spurious pregnancy? In abortion at the eighth week we often cannot find the fœtus; but its absence at the third month leads him to doubt the existence of true pregnancy. He has met with twenty cases in which the fœtus could not be found, and it may be that the suggestion of Simpson is correct, viz: that the fœtus is dissolved in the amniotic fluid.

Scarlatina Without Eruption.—Dr. Noel called attention to a series of cases of scarlatina. Two months ago he visited a negro girl; found great depression of the system; glands of the neck enlarged, and abundant effusion in the throat. Diagnosed the case diphtheria. About the third week of the case, and when she had begun to convalesce, he was compelled to change his diagnosis to scarlatina in consequence of the extensive desquamation that was going on all over the body. The case continued for six weeks, was followed by paralysis of the muscles of the tongue, but finally yielded to powerful tonics. Several other cases in white children were mentioned, all presenting the same clinical history, except two who had a well-matured rash. Dr. N. inquired as to the probable relation between the scarlatina and diptheritic poisons.

Dr. Lynch stated that the relation is well known and established. It is not probable that two diseases of a similar character can run together in the same individual. The trouble about the throat in the cases mentioned by Dr. N. was not true diphtheria, but an exudation resulting from the blood-poisoning of the disease. He attended a case of scarlatina in a tenement house. Shortly afterwards he was called to visit three other children living in the same house. They all presented the symptoms of scarlatina, except there was no eruption in any of the cases—they had been exposed to the contagion of the disease and the diagnosis of scarlatina was made.

Dr. Wilkins remarked that the case mentioned by Dr. N. reminded him of a similar case that he was then attending. He was called to visit a boy, æt. 4 years; found him in a state of extreme prostration, small, feeble pulse, submaxillary glands on both sides enlarged, fauces soft, palate and tonsils covered with false membrane. On visiting the child the next day the effusion had extended down into the larynx, the voice was smothered, the face and extremities livid, and the child evidently dying. During his examination he discovered that free desquamation was taking place over the body, and on interrogating the mother, she informed him that the boy had been slightly ailing about three weeks previously, although she felt confident there had been no eruption. Chemical examination proved the urine to be albuminous. In this case he was satisfied that the patient had had scarlatina, and that the effusion was the result of the same.

Dr. Morris said the theory of scarlatina was as old as Sydenham. A few years ago he published a paper in which he took the ground that there was no scarlatina without eruption. He can readily understand that we could have cases attended with such little eruption and desquamation that it might be overlooked, but if a careful examination is made, the eruption can always be found about the extremities of the fingers and the nates.

Dr. Cathell said that he has frequently met with cases of scarlatina in which there was no eruption. He has observed that when scarlatina is followed by anasarca, it takes place about 22 days after the first appearance of the eruption. From this observation, he has come to regard the appearance of anasarca about 22 to 28 days after a former illness, as diagnostic of the existence of scarlet fever at that time. And, if the anasarca shows itself at a later date, he concludes that it is the common form of dropsy.

Electro-Photographing Ulcers of the Urethra, Rectum, &c. Dr. Caldwell called the attention of the society to his discovery of electro-photographing ulcers of the urethra, rectum, and other passages, by lubricating a silver-plated sound with a saturated solution of iodine in oil, then passing the instrument to the surface of the ulcer, at the same time attaching it to the positive pole of a galvanic battery, while the negative pole, with a large sponged surface, is applied to the surrounding tissues. After a few minutes duration there will be seen on the positive pole a shadow of the shape and size of the ulcer, especially if the surface is sufficient to receive the whole impression. The photograph, no doubt, is a deposit of the iodide of silver, formed by the chemical aeid action of the positive pole. It is important diagnostically and therapeutically, as the ulcers kindly yield to this plan of treatment when other means have failed, as, also, it indicates the exact location of lesions otherwise obscure.

June 10.—**Eczema—Convulsions.**—Dr. Arnold said there is an extensive prejudice against healing eczema of long duration. Although usually disregarding this prejudice, he is now attending a case that would seem to justify it. He was called to visit a child, æt. 16 months, at the breast, and found eczema covering the face, neck and head. The disease had existed for five months. The eruption presented itself in every stage of development, from patches of slightly raised papules to well defined vesicles, and numerous patches of pustules pouring out here and there an ichorous secretion. The skin of the face and neck was inflamed and excoriated, and on the face the patches had coalesced. He had the child's head and face fomented, and applied Hebra's ointment. After several days the disease had healed kindly, when the doctor was hastily summoned and found the child in a convulsion. Before Dr. A. was sent for, the child had been placed in a warm bath and its bowels opened by an enema. The only treatment Dr. A. adopted was to place the child in bed and keep it quiet. The convulsions subsided; but after recovery the eczema re-appeared, and, not deterred, he re-applied Hebra's ointment. This is the first case occurring in his practice in which trouble has followed the healing of a long standing eruption. The question is, what was the cause of the brain trouble? There was nothing inflammatory in its character, and Dr. A. is almost sure that it was the result of healing the eczema. Dr. A. does not wish to imply that infantile convulsions should not receive any treatment. In the case mentioned he found that a number of things had been done, and he proceeded on the principle of giving rest and quietude. Trous-

seau's plan is to leave them alone. The brain is hydrocephalic or anemic in a majority of cases, and hence there is not so much danger of effusion as commonly supposed. There is often mischief back of the convulsion, and it is difficult to determine its nature when we first visit the patient. Convulsions in children take the place of delirium in adults, and we certainly do not treat the delirium independent of the cause.

Dr. Lynch remarked, his experience and observation coincided with Dr. A's. He has never seen a child die from convulsions *per se*. Dr. A. alleges on the authority of Trousseau, the existence of anemia of the brain in convulsions. The symptom of convulsions, especially if they have lasted any length of time, will correspond with those resulting from anemia, but this is due to a deficiency of oxygenated blood in the brain. Again, it is a physiological fact that in anemia of the brain we have the same symptoms as in hyperæmia. How can we have anemia during the convulsions when they are set in action by eccentric causes? They result in more or less venous congestion, the venous arterioles of the brain take on the congestion, and we must have an increased amount of blood in the brain.

Dr. Arnold said the experiments of Kussmaul and Tenner, as well as those of other physiologists, are perfectly conclusive that the brain is in an actual state of anemia during convulsions. In epilepsy, the pallor of the face and neck preceding the convulsion is accepted by Brown-Sequard as a proof of cerebral anemia. The recent experiments by Hammond and Graham, of New York, show that during sleep the brain is anemic.

Dr. Caldwell said that Jacobi and Dr. Alex. Flemming have demonstrated that a state of anemia or hyperæmia of the brain can be produced at will by compressing the carotid arteries or the jugular veins. By compression of the carotid artery all the symptoms of cerebral anemia can be produced; compression of the jugular veins will result in congestion.

June 17.—**Cancer of the Stomach and Liver.**—Dr. Arnold related a case with the following history: Fifteen months ago, a woman presented herself at the clinic of the Washington University. She complained of slight pain in the region of the stomach, dyspepsia, anorexia, and vomiting. At first he was struck with her peculiar complexion and general cachectic condition. These circumstances led him to search for the existence of cancerous growths, and sure enough a hardened mass was found in the epigastric region. There was no vomiting of coffee-grounds or chocolate discharge, but the tumor, in connection with her cachectic condition, led him to make the diagnosis of cancer. Anti-emetics were prescribed, but the vomiting con-

tinued, and the symptoms gradually grew worse until her death a few days ago. The only remarkable feature of the case was the comparatively mild nature of the symptoms.

Post-mortem Examination.—Pyloric orifice contracted, small nodules of scirrhus about the pyloric extremity, and several larger masses scattered over the stomach. Stomach enlarged and its walls thickened and hypertrophied. Liver enlarged, and its under surface, where it comes in relation with the pyloric extremity of the stomach, presented a large, smooth, rounded nodule of a whitish yellow color. There was no obstruction or pressure on the biliary ducts.

Dr. Tiffany remarked that this case presented some features of histological interest, in that, the character of the disease in the stomach resembles scirrhus, while the liver, although in direct apposition with part of the diseased stomach presents the appearance of encephaloid. As is well known, hard cancer owes its greater firmness to the circumstance that the trabeculæ of its stroma are thicker, and the interspaces for the cancer-juice smaller, than in soft carcinoma. The consistency of a cancerous tumor is conditioned by the quantitative proportion of the cellular infiltration upon the one hand, and by the stroma upon the other. This may be influenced by the structure of the part affected. Whether the apparent difference in the specimens before the Society is due to the latter circumstance, or whether they merit a microscopical distinction, he is not prepared to state. The existence of the nodule on the liver immediately in contact with the stomach would seem to indicate its extension by direct contact instead of by metastasis. The absence of jaundice is rather remarkable.

Dr. Arnold said the absence of jaundice in cancer of the liver is not an unusual occurrence. It can only be looked for when there is pressure on the bile ducts. The cancer of the liver is of the usual form; it projects and presents a dense hard surface to the touch; and although it has some points in its resemblance to soft cancer, yet the resemblance is not complete. It is not impossible that the stroma is more sparsely represented in the liver, and the deposition of cancer cells less.

Umbilical Abscess.—Dr. Thomas B. Evans related the following interresting case: M——, æt. 13, son of a truck-farmer, residing in Baltimore county, whilst grooming a horse, was kicked in the abdomen, and thrown back upon the floor in an unconscious condition. He remained in this position until consciousness returned, when he crawled to the stable door, and was there discovered and assisted to the house. When Dr. E. saw him, he found that reaction was fully established, pulse full and

bounding, constant retching, coupled with extreme pain in the abdomen; temperature 104,° thighs flexed upon the abdomen, as is noticeable in cases of peritonitis, and his appearance generally indicated grave constitutional disturbance. The main treatment adopted was creosote to relieve vomiting, and opium to allay the pain and "lock up" the bowels. On the next morning he found the vomiting relieved, but the abdomen was tympanitic and greatly increased in size, and the breathing labored and painful, evidently from the upward pressure of gas upon the midriff. Ten days later the abdomen had decreased in size, but still painful to the touch, and large quantities of gas were expelled *per via naturalis*. Fever moderated, and of an intermittent form. The dejecta were of a liquid character; frequent, large, clay-colored, and preceded by pain. This condition continued for two weeks with no perceptible change, when he noticed at the umbilicus a large fluctuating tumor, evidently containing fluid. Three days later the tumor opened and discharged large quantities of pus, gas, and later, fecal matter. For several weeks the feces were not voided per anum, but continued to pass through the artificial anus formed in the umbilicus, accompanied at times with pieces of undigested food. Since the abscess opened the case has been marked by progressive improvement. Fifteen days ago the stools were passed naturally, and the patient is now having free actions containing pus, blood, and fecal matter. For a short while gas continued to be exhaled through the umbilical opening; but it has since healed, and nothing remains of it at present date except the cicatrix. Adhesion existed between the bowel and abdominal opening. The artificial anus and surrounding parts were kept clean with a solution of carbolic acid.

Dr. Tiffany said it was not an unusual thing to have a protrusion of gut and abscess through the umbilicus. He attended two cases resulting from injury, in which there was inflammation, adhesion, ulceration and abscess. They both recovered. In the case of Dr. E. there may have been a nicking of the gut which gave rise to the subsequent inflammation, adhesion and abscess.

Hernia—Diagnosis Obscured by an Enlarged Gland.—Dr. Friedenwald said that two weeks ago a woman was admitted in the Hebrew Hospital with the following history: Bowels constipated; no action for five days; abdomen tympanitic; swelling in the groin, which did not, however, present the character of hernia; besides which, several other tumors could be felt, apparently glandular in their character. His opinion was that the case was one of strangulated hernia, and proposed operating,

but did not do so in deference to the wish of the consulting physicians, Drs. Stein and Rich, who suggested that in the absence of all the signs of hernia, it would be better to delay. Attacks of vomiting came on, but the ejected matter did not contain fœces. Reduction by the postural taxes was now resorted to, but, after repeated attempts, failed. After the efforts at reduction, vomiting of fœcal matter took place. Dr. Butler was now called in and operated, and found an enlarged gland, with a small knuckle of strangulated gut beneath it. The gut presented a healthy appearance, but the sack, containing a quantity of dark colored fluid, was removed. The patient has recovered.

Scarlatina.—Dr. Lynch called attention to a case, peculiar in that it ran an abnormal course. A child, æt. 2 years, woke up one morning with scarlatinal rash well marked; it seemed cheerful and played about the room until the same afternoon, when he was sent for. When he arrived, the temperature was 103°, pulse 68, and the glands of the neck tumefied. The next morning, the temperature was 107°, glandular swelling increasing, and the case was evidently malignant. Quinine was given, but discontinued, because it irritated the stomach, He then gave tinct. verat. vir., gtt. ij, every two hours, but it failed to reduce temperature. Hot baths gave comfort, but did not reduce the temperature. Alcohol was now given, but as it excited vomiting, it was laid aside, and brandy was injected into the rectum. In two hours afterwards, the temperature had fallen to 104°, and by next morning, to 102°.

Michigan State Medical Society.—At the session in June, the following officers were elected: Drs. Wm. Brodie, Detroit, President; Jas. A. Brown, Detroit, G. O. Frothingham, Ann Arbor; H. B. Shank, Lansing; C. W. Backus, Three Rivers, Vice Presidents; Geo. E. Ranney, Lansing, Recording, and Leartus Connor, Detroit, Corresponding Secretaries; G. Chittock, Jackson, Treasurer.

The Detroit Medical College was requested to enlarge its course of study, and to adopt a higher grade of preparatory accomplishments.

A committee was appointed to report upon the proposition to form an inter State Medical Society, from the profession in Michigan, Ohio, Indiana and Ontario.

The next session will convene in Ann Arbor, on first Wednesday in May, 1876.

Analyses, Selections, &c.

Sclerosis with Eburnation, or Exostoma of the Humerus—Death from Hemorrhage in the attempt to Amputate above the Shoulder-Joint.—Prof. Paul F. Eve, of Nashville, contributes an interesting case to the *American Medical Weekly*, July 17, 1875. A gentleman, aged 25, living in Weakly county, Tenn., broke his left arm in 1865, from which he is said to have recovered in six weeks. During July, 1874, he was thrown from a horse, upon the left shoulder and arm. February 10, 1875, he came to Nashville, and was the subject of a clinical lecture. A tumor, about the size of an orange, apparently under the deltoid muscle, was commented on, and the apprehension expressed that it might not be innocent, as his family was said to be consumptive. He declined to be operated on; he was therefore ordered to use compound iodine ointment over the swelling, and to observe a tonic, nourishing, hygienic and alterative plan of treatment.

June 23, 1874, patient returned to Nashville. The tumor was now stated to be 24 inches in circumference, and the limb was œdematous. An opinion adverse to operation was given; but after the patient had been refreshed by sleep, &c., it was suggested that amputation above the shoulder-joint (as this alone promised relief) might be justifiable. To this, he finally assented, with the full understanding that the result was by no means certain.

By appointment, Dr. E., with his son, Dr. Duncan Eve, met Drs. Shannons, Johnsons, Cutler, Edwards, Sharer, &c., at the patient's home, near Dresden, West Tenn., June 26th, 1875. The upper two-thirds of the left arm was occupied by an immense tumefaction, 25½ inches in circumference, remarkably hard, and so heavy that the patient inclined to that side, and supported the left arm with his right hand while walking, or upon his knee when seated. Rotation of the humerus in the glenoid cavity was very limited, as was also abduction of the arm; pressure upon the acromion process gave pain. Dr. Shannon had once punctured the tumor, when blood alone escaped; the wound healed kindly.

It was contemplated (1) to divide the clavicle (for this could be wired) in order to reach the subclavian artery, since the great tumefaction prevented the shoulder from being drawn downwards towards the first rib, upon which rests the artery; (2) to tie the artery; and (3) to excise the diseased mass in its entirety.

In making the first incision over the clavicle, near its posterior

edge, four vessels bled furiously. Several attempts at ligation with silk proving unavailing, a compressed sponge was used with success.

This hemorrhage was undoubtedly due to the cellular tissue by means of which the vessels might have retracted and contracted. In another case (of cellulitis), Dr. E. had encountrred a like embarrassment during operation. The hemorrhage being controlled by compresses, Dr. E. attempted by free, rapid incisions to amputate at the scapulo-humeral articulation. Here, again, profuse hemorrhage followed every stroke of the knife, when the operator was told that the pulse was failing; soon after respiration ceased. Esmarch's elastic bandage and other compresses were vigorously and persistently applied, and Nélaton's method of resuscitation was resorted to, but all efforts proved unavailing.

The osseous mass removed proved to be an expansion of the upper portion of the left humerus. It is a hard, iregular shaped, osseous structure; its surface is very rough, and presents large orifices from a thick, grumous, pulpy substance. No normal bony structure was detected, and no cartilage except about one-third of its glenoidal articular surface. The portion brought back to Nashville weighed ten pounds.

The affection, then, was not exostosis or hypertrophy of bony tissue; but there was hardening and thickening of the periosteum with eburnification (ivory-like hardness) of the bone itself, constituting sclerosis and eburnation. Another marked peculiarity of the specimen was total destruction of cellular tissue throughout the diseased mass. The blood which escaped was so black that, by the *per saltum* alone, the arterial could be distinguished from the venous hemorrhage. The tumor was not fungus hematodes, but evidently semi-malignant in character, as it destroyed all parts alike.

This is the first patient Dr. E. has lost on the operating table, due directly to the operation itself, in his 48 years practice of surgery. He claims that no one could have been better assisted in the operation, nor could greater efforts have been made to revive the patient, by whose relatives and friends every kindness was shown. Dr. E. remarks that, if any one is to be censured, "I alone am that person." He continues, "It is true that I never learned until after his death, that he had been injured by a fall, ten years previously, on the diseased shoulder; and moreover, it may with truth be said, that he could not have survived much longer. Still no operation, we now know positvely, ought to have been attempted. It may be right, too, to state that his friends believed he had been injured by two snake-bites. [A thought of censure of Dr. Eve for his course in this case would be simply absurd.]

Treatment of Obstinate Vomiting of Pregnancy.—Dr. Graily Hewitt states, in the *British Medical Journal*, that the results of Dr. Copeman's accidental discovery of artificial dilatation of the os uteri by the fingers as a cure for obstinate sickness in pregnancy are remarkable and very important. Dr. Copeman does not attempt to explain the *modus operandi*, which, however, Dr. Hewitt does.

Dr. H. read a paper before the Obstetrical Society in 1871, in which he enunciated the theory, supported by facts and observations, "that obstinate vomiting, and, indeed, ordinary vomiting in pregnancy, are due to a flexed condition of the uterus, the compression of the tissues of the uterus at the seat of the flexion constituting the irritation, which gives rise to the vomiting."

Dr. Copeman's clinical contribution of three cases has a strong and direct bearing on this question. The three cases occurred respectively at 6, 2 and 8 months; and in each case the vomiting at once ceased on dilatation of the os with the finger. In the second case, the uterus was anteverted, but Dr. Copeman does not state the condition in the other two cases. Dr. Hewitt believes that in all three cases there was or had been acute flexion, and that the dilatation removed the vomiting by reason of its also relieving the cramped, confined condition of the cervix. On the supposition that there was flexion in all three cases, the os must have been far back, and, in order to dilate it, it must have been pulled forward. The dilatation necessarily implies a righting of the os and lower segment of the uterus, and a consequent unbending of the organ; for to draw the os forward would of necessity tend to tilt the fundus upwards. The uterus, as a whole, is on a pivot; direct pressure, or dragging on one extremity, will affect the other extremity; and thus the process of dilatation, involving, as it does, the dragging of the os forwards, would practically aid in placing the whole organ in its proper position.

Obstetric authors speak of the gravid uterus as being naturally anteverted in the first part of pregnancy; this statement requires important qualification. There are degrees of anteversion. It is one thing for the body of the uterus to be rather easily felt by the touch through the vaginal wall, as it undoubtedly is in ordinary cases; but it is another for the roof of the vagina to be actually depressed by the abnormal descent of the enlarged body of the uterus when it is anteflexed. In the latter case, the os is always further back than usual, and, in marked cases, the body of the uterus is for the time completely jammed

in the pelvis. Under these latter circumstances, obstinate vomiting most commonly occurs.

When vomiting persists as late as the eighth month, as in Dr. Copeman's third case, the uterine tissues at the seat of flexion are left in a diseased state, being stiffened and unduly resistent, and thus irritation is kept up. But when there has been acute flexion in the early part of pregnancy, as the uterus enlarges, (if abortion do not occur) the flexion is in most cases abolished, and the effect is that sickness generally disappears under such circumstances.

Dr. Copeman's treatment would tend to remove this stiffening and constraint. Undoubtedly there was undue tension in his cases, situated, as Dr. Hewitt considers, at or near the internal os uteri, which is the situation of flexion under ordinary circumstances, and Dr. Copeman's procedure acted precisely in the way he conjectures.

Dr. Hewitt has been accustomed to treat cases of obstinate sickness in pregnancy by elevating the body of the uterus, and has found that the same immediate good result follows, as was observed in Dr. Copeman's cases; hence he is prepared to hear that traction of the os forwards will produce a like effect. Both procedures have the same result—liberation of uterine tissues at the internal os from their cramped, compressed condition. He has had occasion several times to elevate the body of the uterus in the first months of pregnancy with the view of arresting vomiting. In some instances, the result has been so satisfactory that he intends investigating the matter more thoroughly. In order to elevate the womb, a rather large block-tin ring pessary may be used so as to be certain that the organ may be well kept up, and pushed well up into the parts. Distension of the vaginal walls occasions no grounds for alarm; on the contrary, it has appeared that if any benefit is to be derived from this plan of treatment, the womb must be kept considerably elevated by a rather tightly-fitting pessary. When unable to procure a block-tin ring, he has employed Hodge's retroversion pessary; and in two cases of anteversion, he has turned the pessary around, placing the vertical bar in front of the uterus. Not only did this procedure cause no annoyance to the patients, but on the contrary, the relief was so great that he was encouraged to reverse the position of the pessary used for retroversion, in three cases of anteversion, outside of pregnancy. In two of the cases, there was no undue sensitiveness, either of the bladder or of the anterior vaginal wall; in the third, however, he had to withdraw the pessary. In an article by Dr. Albert H.

Smith, Philadelphia, on the Use of Pessaries in the Early Months of Pregnancy, (*Obstet. Jour.*, April) attention is called to the fact, alluded to previously, that "when patients who have previously had children have become pregnant while wearing pessaries, they have observed * * * * the fact, that the symptomatic *nausea has been greatly diminished.*—*N. O. Med. & Surg. Jour.*, July, 1875.

Vesical Calculus—Right-Sided Hemiplegia and Aphasia. Dr. Longworth reported to the Cincinnati Academy of Medicine that he had seen with Dr. Dawson, a boy, aged 11, suffering three years from stone, who, during May, had been sounded on three different occasions; after the second sounding, some peritoneal symptoms developed. Early in June the mother was attracted by the child's cries, when she found the right side paralysed. In a few minutes this symptom disappeared. In a week it returned, but this time the hemiplegia was accompanied by loss of speech. At the end of a week he could walk some, carry his paralysed arm to his head, and make some attempts to speak. Dr. Dawson, June 30th, extracted a small flattened calculus measuring $\frac{7}{8}$ by $\frac{3}{4}$ inch. Since the operation he has done well and is gradually regaining the loss of power. He can now speak a few single words but not whole sentences. He will sometimes refuse to pronounce certain words but will substitute others for them. The operator explained the paralysis as reflex. The heart had been examined and nothing abnormal found.

Dr. Bartholow said that when paralysis or spasm is transmitted by peripheral irritation it is bilateral. The point in this case of particular interest is that a lesion so distinctly localised by the symptoms of right hemiplegia and aphasia should follow such an irritation. These symptoms have been so often found to indicate a lesion in the vicinity of the language centre that he would rather refer them to a local lesion than to peripheral irritation.

Dr. Whittaker thought the case could be explained on the theory of reflex transmission. It is well known that convulsions may follow peripheral irritation, and there is a certain resemblance between convulsions and paralysis. In most convulsions, there is first a spasm, which includes not only muscles, but also the smaller vessels as shown by pallor of the skin. After this, paralysis, or relaxation with distension is manifested by the flush of the countenance. Now, it has been shown that this spasm may last a variable period, and may be confined to a certain vessel or set of vessels, as was possibly the case here.

Dr. Longworth stated that a physician, after the extraction of

a tooth, had right-sided hemiplegia with aphasia, which lasted two hours.

Dr. Bartholow replied that this was merely the effect of mental emotion, which emotions have been known to suspend for a while the functions of certain organs or nerves, but the case under consideration was entirely different, it having already lasted for weeks.

Dr. Whittaker thought that the accidents of pregnancy proved that we may have an arrest of function of any nerve or set of nerves while all the rest may be intact.

Dr. Muscroft had seen stone in the bladder lead to epileptiform convulsions and had read reports of hysteria in a male due to the same cause, but could not comprehend how the symptoms manifested by this patient could have been dependent upon the vesical irritation.—*The Clinic*, July 17, 1875.

Book Notices, &c.

Bad Health: Its Physical and Moral Causes in American Women. By JAMES E. REEVE, M. D., Wheeling, W. Va. Price 50 cents.

This is a beautifully printed pamphlet of 44 pages, presenting a paper which was read by the author before the American Public Health Association, 1874, extracts of which were published in the *New York Daily Times* and widely copied by other papers. The statements of the causes of bad health among American women are so correct, and the portraitures of the effects so true to nature, and the lessons attempted to be inculcated so valuable, that we would be glad to know this pamphlet was read by every mother and adult daughter in the land. The author has, withal, written his paper in a very chaste, readable, but forcible style.

The Management of Eczema. By L. DUNCAN BULKLEY, M. D., A. M., New York: G. P. Putnam's Sons—1875—Paper pp. 22.

This paper is reprinted from the *Trans. Amer. Med. Association*, 1874. Its aim "is to impress the fact that while eczema is a disease, *sui generis*, it is not to be treated abstractly as such, but rather, the patient is to be restored to health; that eczema depends upon many different conditions, and is consequently amenable to the most varied measures." The great eminence of Dr. Bulkley as a dermatologist, second scarcely in our estimate

to any of the great men of Europe, gives value to any paper from him on the subject which is not attached to most of the papers we are in the habit of seeing. If we could induce the profession to read this essay attentively, there would be less empiricism and nonsensical treatment in the management of this most common skin disease.

Medical Communications of the Massachusetts Medical Society, 1875. Benj. E. Cotting, M. D., Roxbury, President; F. W. Goss, M. D., Roxbury, Recording Secretary.

This volume, *as printed*, is entirely of State interest, with the exception of the very excellent address of the late President, Dr. Geo. H. Lyman, on the Interests of the Public and Medical Profession, which is an admirable discussion of the questions relative to the aims and acquirements of the regular profession as opposed to such exclusive foolish dogmas as eclecticism, homœopathy, &c. The address also ably discusses the question as to whether our medical schools and hospitals should be open to women, in which fair justice is done to women, in fact, her noble virtues rightly exalted, and her true sphere in life pointed out—but that sphere, he thinks, is not as a medical student or a medical practitioner. The address also reviews the latitude now permitted by law to the operations of unqualified practitioners, depicting the dangers to society of such licenses of law. This address would suit well as an independent publication to be distributed widely throughout the country.

Iridotomy. By A. W. Calhoun, M. D., Prof. Diseases of the Eye and Ear in Atlanta Medical College.

This is a reprint of eight pages from the *Southern Med. Record*, showing the applicability of *iridotomy*, in preference to iridectomy, in certain defects of the eye, with four illustrative cases. Iridectomy is *cutting out* a portion of the iris; iridotomy is *cutting through* the iris, but removing no portion of it, though accomplishing the same object, viz., entrance of light through an artificial opening into the interior of the eye; which opening is sufficiently small, after *iridotomy*, to prevent letting in too much light.

Treatment of Uterine Displacements by Position. Pneumatic Pressure, and Mechanical Appliances. By Professor H. F. Campbell, M. D., Augusta Ga.

This is a pamphlet from the *Atlanta Med. and Surg. Jour.*, reviewing the *genu-pectoral* position of the patient for replacing

a displaced uterus. The method is an excellent one, and if this pamphlet will attract the attention it deserves, many embarrassments in gynæcological practice will be overcome. We have adopted the plan on several occasions before the appearance of Dr. Campbell's paper, but while recognizing that the method was not original with us, we were yet unable to recall from what source we derived the suggestion. The exact position of the patient is the all-important point. It is not the knee-elbow position; but the patient being caused to kneel on a level plane, with the thighs perpendicular, the body is bent forward and downwards so as to let the breasts rest on the same plane as the knees, with the back swayed—thus placing the buttocks in the most elevated position, from which there is an inclined plane formed by the bending of the body forwards. The exact position is as important to accomplish the end in view as that special position recommended for the introduction of Sims' speculum, and the reason is obvious—to get all the force of gravitation to act on a fallen womb. As soon as the position is properly secured, then the pressure of air (admitted *per vaginam* by means of a small glass tube properly shaped—such as Campbell's Uterine Repositor) will of itself carry the womb back to its normal position—provided there be no adhesions.

Report of the Board of Managers of the Pennsylvania Hospital, 1875.

It is, "in these days, when loose and irregular administration of public affairs is unfortunately too common * * * a source of gratification that in all the lengthened history of the Pennsylvania Hospital—which has dispensed its blessings and its bounties for more than a century [on nearly 100,000 patients]—no shadow of suspicion or doubt has ever fallen upon those who have had control of its affairs." (Extract from remarks of Hon. Morton McMichael, on taking the chair at the annual meeting of *contributors*, June 3, 1875).

Announcements of *Medical College of Ohio*, 1875–6.

Savannah Medical College, 1875–6, with an address by A. P. Adams, Esq., on "Fidelity to Calling," delivered at the Commencement, March, 1875.

Washington University: Medical Department, Baltimore, 1875–6.

Hospital College of Medicine, 1875–6.

College of Medicine: Syracuse University, 1875–6.

Editorial.

Dr. Hugh H. McGuire.—We regret to learn that this eminent surgeon and physician is lying dangerously ill, at his residence in Winchester, Va. He has recently received a severe fall, and is now laboring under the nervous shock produced thereby. Although past three score and ten years of age, Dr. McGuire's death would be a sad and serious loss to the public and profession of this State.

Six or Eight Copies of our November No., 1874, are wanted. We hope parties who do not keep files of their journals will favor us in this matter. Liberal prices will be paid.

Delegates to Attend the Sessions of the Association of Medical Officers of the Confederate States Army and Navy, and of the Medical Society of Virginia, to Convene in Richmond, Va., October 19th and 20th, 1875.—We have heard of the following appointments: Drs. Chas. O'Hagan, S. S. Satchwell, Hicks, E. B. Haywood, Hines, Chas. Duffy, Jr., W. A. B. Norcom, Stith, Thomas F. Wood, Geo. A. Foote, M. M. Whitehead, R. L. Payne, Rountree, H. O. Hyatt, Jas. McKee, Summerell, Enniss, R. H. Winborne, Willis Alston, and H. T. Bahnsen, of *North Carolina;* Josiah Hains, R. B. Doster, T. F. Walker, T. J. Wood, F. M. Calhoun, C. B. Nottingham, W. D. Hoyt, L. A. Dugas, and A. J. Shaffer, of *Georgia;* Henry R. Noel, Judson Gilman, and Chas. H. Ohr, of *Maryland;* and E. A. Semple, of *Alabama.*

A number of other delegates have been appointed by other States, but we have not been advised as to the names. We would request all Secretaries to forward their lists at once.

The Medical Protective Association of New Orleans is the name of a new Association formed in New Orleans for the purposes indicated by the title. That city has so long been subjected to professional abuses that this step will be applauded by the profession generally. Dr. D. C. Holliday is President; Dr. W. H. Watkins, Secretary.

MORTUARY STATISTICS OF SOUTHERN CITIES FOR JUNE, 1875.

NORFOLK.—"City very healthy."

LYNCHBURG.—"You will perceive that 5 whites to 32 blacks died in June—besides 7 still-born blacks. Of blacks, 16 died without medical attendance. Their improvidence begins to tell on them."

MOBILE.—"Quarantine has been established by the city authorities under the direction of a very efficient Board of Health, against the ports of Havana, Key West, Vera Cruz, &c. If constant vigilance can effect anything, no yellow fever will get to Mobile this summer. The city is also clean, and in good trim for the summer."

(Compiled from Reports of the several City Boards of Health.)

Cities	RICHMOND, VA.				NORFOLK, VA.				LYNCHB'G, VA.				MOBILE, ALA.				SELMA, ALA.				ATLANTA, GA.			
Health Officers, ...Doctors	J. G. Cabell.				Wm. M. Wilson.				R. S. Payne.				W. D. Bizzell.				John P. Furniss.				E. L. Connally.			
Population	Census Feb., 1874, though estimated at 65,000.				Estimated.				Estimated.				Census 1870. In addition 1,200 Creoles are estimated				Estimated.				Census 1873, tho' estimate is 35,000.			
	White. 33,452		Colored. 27,213		White. 12,500		Colored. 9,500		White. 7,000		Colored. 7,000		White. 18,115		Colored. 13,919		White. 3,500		Colored. 4,000		White. 18,526		Colored. 11,607	
Sex	M.	F.	M.	.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M	F.	M.	F.
Number of deaths	35	45	49	31	7	7	12	12	2	3	16	16	20	16	27	19	3	1	1	7	26	11	22	18
Number still-born in addition	5		5		0		3		0		7		0		6		0		1		2		4	
Ages. Ages unknown not calculated. Under 1 year	42		47		8		10		1		20		7		15		1		4		20		26	
" 3 years	8		9		...		3		....		2		2		3		...		2		3		4	
" 10 "	...		3		2		3		1		3		6		2		....		....		...		...	
" 20 "	6		2		...		...		...		3		2		3		....		2		3		4	
" 30 "	4		6		...		2		...		2		5		3		1		...		2		4	
" 40 "	3		4		1		...		2		1		4		1		2		...		2		...	
" 50 "	4		2		1		1		1		2		5		8		...		...		2		1	
" 60 "	3		3		1		3		...		...		1		4		...		...		2		1	
" 70 "	6		3		...		...		...		...		5		2		...		...		2		1	
" 80 "	2		...		1		1		...		....		1		...		....		...		1		1	
" 90 "	2		1		...		1		...		...		...		...		...		...		...		...	
" 100 "	...		...		...		...		...		...		...		1		...		...		...		1	
Over 100 "	...		...		...		...		...		...		....		...		...		...		...		...	

CAUSES OF DEATH.

Abscess of kidney, abscess	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
Accidents, Suicides, Wounds, &c	3	.....	.....	.....	.....	1	1	1	.....	.....	1	1
Angina Pectoris	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Apoplexy	.....	1	.....	.....	.....	.....	.....	1	.....	.....	2	.....
Ascites, Dropsy, &c	1	.....	.....	1	.....	.....	.....	1	1	.....	.....	2
Birth, Premature	2	.....	.....	.....	1	.....	2	.....	.....	.....	1	.....
Brain Disease	1	.....	1	1	.....	1	...	.....	.....	.....	.....	5
Bright's Disease	1	.....	.....	.....	.....	.....	2	4	1	.....	.....	.....
Bronchitis, acute	.....	1	.....	.....	....	....	.....	.....	.....	1	.....	.....
Cancer	2	.....	.....	.....	.....	.....	2	1	.....	.....	1	.....
Cholera Infantum	26	21	1	4	.....	1	2	1	.....	.....	4	1
Colic, cramp	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Congestion Bowels, Brain, Lungs, &c	5	3	.....	.....	.....	.....	2	.....	.....	.....	.....	.....
Consumption	3	6	.....	.....	.....	3	3	4	.....	3	1	4
Convulsions, Intestinal, Irritative, &c	2	2	.....	.....	.....	.....	1	3	.....	.....	3	4
Convulsions, Puerperal	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Convulsions, Uræmic	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diarrhœa & Dysentery	2	10	3	3	.....	2	3	4	.....	.....	3	4
Diphtheria	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....
Enteritis, Entero-colitis	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Erysipelas	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Fever—Congestive	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
" Intermittent	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
" Puerperal	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
" Typhoid	1	1	.....	1	.....	.....	.....	1	.....	.....	.....	3
Hæmorrhage, Umbilical	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Heart Disease	2	5	.....	.....	2	2	2	3	.....	.....	2	1
Hernia, Ileus	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hydrocephalus	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inanition, Old Age, &c	7	7	4	3	.....	2	3	1	.....	.....	2	2
Leucocythæmia	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Meningitis, Cerebro-Spinal	.....	.....	.....	.....	.....	.....	2	1	.....	.....	.....	.....
Meningitis, Tubercular Meningitis	2	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2
Paralysis	.....	1	.....	.....	.....	.....	1	1	.....	.....	1	...
Pyæmia, Septicæmia, Uræmia	2	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Pneumonia	1	1	.....	2	.....	1	2	.....	.....	.....	.....	1
Scarlatina	.....	.....	1	2	.....	.....	.....	....	.....	.....	.....	.....
Small-pox	.....	.....	....	.....	.....	.....	1	2	.....	.....	.....	.....
Spina Bifida	.....	1	.....	.....	.....	...	.....	.....	.....	.....	.....	.....
Stricture of Urethra	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Syphilis—Congenital	.....	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....
Tabes Mesent., Marasmus, Scrofula	.....	1	.....	.....	... ..	.....	1	4	.....	.....	.....	.....
Teething	.....	3	.....	.....	.. ...	.....	.....	.....	.....	1	7	11
Tetanus, Traumatic	.....	1	.....	1	.....	.....	1	.....	.....	.....	.....	.....
Trismus Nascentium	.....	1	.....	.....	.....	.....	1	3	.....	1	.....	.....
Ulcer, Ulcer of Stomach	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Unknown or Ill-Defined	4	7	.....	.....	2	16	.....	3	.....	1	3	1
Whooping Cough	1	.....	1	3	.....	.....	.....	.....	.....	.....	.....	.....

Georgia State Board of Health.—This Board is composed of Drs. J. G. Thomas, Savannah, President; V. H. Taliaferro, Atlanta, Secretary; H. F. Campbell, H. H. Carlton, George F. Cooper, R. M. Cromwell, G. W. Holmes, J. P. Logan, C B. Nottingham, F. A. Stanford, and the Attorney-General, Comptroller-General, and State Geologist, *ex officio*.

Nashville Journal of Medicine and Surgery loses its senior editor by the resignation of Dr. Bowling. It will hereafter be conducted editorially by Drs. Wm. T. Briggs and T. O. Summers, Jr.

The Psycological and Medico-Legal Journal, heretofore edited by Dr. Wm. A. Hammond, is hereafter to appear quarterly instead of monthly, and will be edited by Dr. A. McLane Hamilton. G. P. Putnam's Sons, New York, Publishers.

The Chicago Medical Journal and the **Medical Examiner** were consolidated August 1st, 1875, and will hereafter be known as the *Chicago Medical Journal and Examiner*, and will be conducted by a stock company composed of leading medical men of Chicago. The annual volume will contain 960 pages. Subscription, $4 per annum

Obituary Record.

Dr. Lewis Rogers died at his home in Louisville, Ky., June 13th, 1875, in the 64th year of his age, of cancer of the stomach. He enjoyed the unbounded confidence of all his patrons during the 40 years of his active professional life; while by his professional brethren his merits were recognized and appreciated. "In the chairs filled by him in the Medical Department of Louisville, he fully justified the anticipations of his friends, glowing as they were; and when he was elected President of the Kentucky Medical Society, his elevation caused an almost universal approval among members of the profession * * * throughout the ranks of the medical profession." At the largest assemblage of the medical faculty of Louisville ever held on such an occasion, among other resolutions adopted was one requesting Prof. L P. Yandell, M. D., to prepare a biographical memoir. Dr. Rogers lived the life of a noble christian physician, and in dying leaves a memory that will be cherished in the hearts of the community, and a name that will be inscribed on the roll of the honored great.

VIRGINIA
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Original Communications.

ART. I.—*Curable and Incurable Diseases.* By JOHN L. COOK, M. D., Henderson, Ky. (Read before the Kentucky State Medical Society, at its Twentieth Annual Session, Henderson, Ky., April 7th, 1875.)

Diseases of the heart have not been studied carefully, until recently, by country physicians; but with the present lights on the subject, no practitioner is excusable for not being able to recognize valvular lesions of this organ by physical signs. However, most doctors seem to ignore diseases of this viscus, and are willing, generally, when called on to treat cardiac affections, to announce to the patient, upon inquiry, that he has "heart disease," without ever being able to locate the malady in any special chamber. And I need not say that, in ordinary cases, there is no apology or excuse for such ignorance; for what is plain and practical, and can be understood by one, should be understood by all. Like other questions of great moment, it requires time and study to acquire practical knowledge; and it is a sad commentary on the medical profession that so many physicians spend their hours in some idle or trifling pursuit, but at the same time create the impression that they are *lucky* doctors. Whenever I hear such talk, I am sure that the person guilty of the practice is an arrant humbug; for ask such an one as to the natural course of diseases, when entirely unaided by medication, and he will give but little satisfaction in his answers.

The question arises in every case, would the patient recover if nothing was done for him save supplying his wants with proper food? If the question can be answered in the affirmative, then

why claim, after restoration of the patient, to be a born doctor, thus taking to oneself the credit of that which Nature did, perhaps in spite of his efforts? Did any one ever hear of a case of chicken-pox ending fatally? I never did. Then where would be the truth in one's saying, after treating a dozen such cases, that he was a favored physician, forsooth his patients recovered?

But with these few preliminary remarks, I shall proceed at once to the reports of cases bearing on the question under consideration, to wit: *Valvular affections of the heart as some of the types of incurable diseases*, which will be followed up with a few remarks, as a contrast, on the *possible curability of all acute affections of the human system.*

Case I.—*History.*—On May 13, 1874, I visited Peter L. for the first time. He is 65 years old, and a native of France, but has been in this country nineteen years; had rheumatism when 45 years of age; two years ago had intermittent fever, and for the last fifteen months difficulty of breathing has prevented him from taking the recumbent position with any degree of comfort. There is blueness of both lower extremities; moreover has had palpitation of the heart and præcordial pains, which extended to the left arm during this period. He is harrassed with a bad cough, and expectorates muco-serous and muco-purulent matter.

Signs.—Examination by *percussion* reveals complete dulness over the region of the heart, from the sternum to the left nipple. The heart's impulse is seen between the fifth and sixth ribs; also between the sixth and seventh on the left side, an inch to the left of a perpendicular line drawn through the nipple. On *auscultation*, the rhythm of the heart is greatly disturbed in its action, as shown by the absence of a sound at every fourth or sixth pulsation; and, although not exactly in place here, I will state that the pulse intermitted just as the heart did. Over the apex of the heart, there is disclosed a systolic murmur which is not confined to this region, and which is quite significant; but this fact will be alluded to hereafter when summing up the reasons for the diagnosis. There is also aortic direct murmur at the base of the heart, heard in the second intercostal space on the right side, which is conveyed to both carotid arteries and upper part of the sternum. No second sound is heard here at all. Sibilant and sonorous rales are heard over both lungs posteriorly.

Diagnosis.—Mitral regurgitant murmur and aortic direct murmur, the pathological conditions of which they were manifestations, at last induced hypertrophy.

Prognosis, as to recovery, of course, unfavorable.

Treatment.—The first evening he took two powders, composed each of three grains of calomel and one of ipecac, which moved his bowels five or six times.

May 14.—Still rested badly through the night, and he was put on the following: ℞ Tinct. Digitalis, Tinct. Belladonnæ āā ʒj Fiat mistur.—S: 20 drops four times a day, four hours apart.

May 15.—Took the recumbent posture last night for the first time in two months; slept nearly all night, and was quite cheerful and comfortable in the morning.

May 22.—The patient has continued to improve rapidly on the digitalis and belladonnæ. To-day there is no orthopnœa; the patient sleeps well, and pretty much all signs of bronchitis are gone. The medicines have acted well on the kidneys which evidently has had a happy effect on the serous effusions in the lower extremities. The surface of his body is still blue, with large full veins standing out prominently, all of which has been explained as resulting from regurgitation of blood in the left side of the heart which, in the end, affected the function of the right side by pulmonary congestion.

Commentary.—The first thought connected with any malady is what induced it. It is very evident that rheumatism brought on endocardiac disease that eventually led to structural derangements of the different valves involved. It is scarcely worth while to go into any further details with reference to symptoms, as this case has furnished those that are usually seen in cases of similar nature. But it is with regard to diagnosis and its importance I wish for a brief space of time to occupy your attention.

It may be very appropriately asked, why I decided, in the first place, that there was regurgitation at the left auriculo-ventricular opening which is generally so well guarded by the mitral valves. In order to render the subject sufficiently plain for any one to comprehend it, it will suffice to say that the first sound is caused by the impulsion of the heart against the walls of the chest, the closing of the mitral and tricuspid valves to prevent the backward current of blood into the auricles when both ventricles contract, and the noise made by the muscles of the heart itself during its movements. It is therefore a mixed sound. The closure of the semilunar valves of the pulmonary artery and aorta produce the second sound. It is entirely valvular, there being no other agency concerned in its production. It does not

come within the scope of this article to cite the experiments going to establish these statements.

Now why did I decide there was mitral regurgitation? Well, I shall undertake the task of demonstrating that the diagnosis was correct. To begin, the murmur was heard over the apex beat of the heart, and this is the location where sounds of mitral valvular diseases are found. The next point to determine was whether there was mitral obstruction or regurgitation. As a rule, when there is regurgitation at the mitral orifice, the sound will be propagated around the left side and will be distinctly heard over the scapular region, and this was precisely what was disclosed in the examination of this case. This is one link in the evidence to prove there was not obstruction; but more, had there been obstruction at this opening, the murmur would not have been revealed with the first sound of the heart, because when the auricle contracts, the mitral valves open before the first sound: and had it, from narrowness here, prevented the onward flow of the blood, the murmur would certainly have been presystolic, or heard before the first sound. Not only that, but by placing Cammann's stethescope an inch to the left of the nipple, I was enabled to hear clearly the valvular element of the first sound; and furthermore, the murmur occurred simultaneously with this sound. Well what did this show? It showed that the murmur appeared with the systole; therefore of necessity it was caused by the contraction of the left ventricle, consequently there was present mitral regurgitation. Again, the murmur took place during the impulsion of the heart against the walls of the chest, not when it receded, as if it were in a trough of waves.

I now turn my attention to the aortic obstruction, one of the features of this case. When the left ventrical contracts, it drives the blood forward through the aortic orifice, by and beyond the semilunar valves. This murmur was heard at the base of the heart with the first sound in the second intercostal space on the right side, and was thence propagated into both carotid arteries. This could not be had there been regurgitation, for in that event the murmur would have accompanied the second sound of the heart, and travelled downwards and to the left of the sternum, as it has been stated the second sound occurs with the closure of the semilunar valves, and the closure of these valves is to pre-

vent regurgitation; so when there is regurgitation here, the adventitious murmur will be with the flapping back of the aortic valves, or in other words during the second sound of the heart. The second sound was heard between the third and fourth ribs on the left, and was followed closely by the murmur. One peculiarity of this murmur was that it was very intense over an area of several inches in the præcordial region; however, the sound was confined to the body of the heart.

What can be said with reference to the remote consequences of valvular derangements of the heart? The history of the case before us presents a satisfactory answer to the question. Just what might be expected really took place, viz: if there were regurgitation at the mitral valves, the blood would inundate the lungs, so to speak, like a country contiguous to a river would be, if sufficient impediments by a dam or otherwise prevented the flow of water in the natural channel. Hence followed congestion of the pulmonary structures, bronchitis, pneumonitis, etc., for the reason that the blood failed to pass on in its proper course; and, with the lung complications to prevent the onward flow of blood through the pulmonary arteries, resulted an accumulation of this fluid in the right cavities of the heart, which in turn led to valvular lesions, then hypertrophy, and lastly congestion of the whole systemic circulation, œdema and blueness of the lower extremities, of which a practical demonstration has been observed in the case just related. Of course it requires no explanation to understand if there were too much blood in the right cavities of the heart—since it could not pass rapidly enough through the lungs—the result would be stagnation in the veins throughout the system, and finally serous effusions into various parts, constituting dropsy.

Case II.—I now proceed to another case of like import. Mattie G., 11 years old, and possessing sprightliness far beyond one of her age. When five years old, she was badly frightened by a servant girl jumping at her from behind a door, and soon after commenced having "nervous spells" as her mother termed them. Never had rheumatism before this fright. Once while out in the yard she sank down almost powerless to move.

In January, 1874, she came under my observation, at which time I treated her for intermittent fever; but I also found her with a distressing cough from bronchitis, etc. She had been treated by

different physicians for disease of the heart; and as she seemed not likely to improve by leaving her case entirely to nature, so far as the pulmonary complications were concerned, on the 15th day of May, I made a thorough examination of the heart, with a view to some definite mode of treatment, having for its object the tranquility of the heart's action as well as some sort of relief for her distress. I was not content to say "Mattie you have heart disease," as all can understand, a vague expression—just as is often done with patients who have eruptions on their skins, and when they inquire of their physicians what is the matter they are comforted with the assurance that they have "hives," which everybody knows means everything, anything and nothing. But I wished to know for a certainty if the heart were diseased or not; and if so where were the lesions seated, in what particular chamber or chambers, or what particular valve or valves were involved? Nothing else would satisfy me. To accomplish this end, of course, I resorted to physical examination, with a view to the situation of the heart, its enlargement, the modification or absence of its natural sounds, or the discovery of adventitious murmurs, their significance, etc. The apex beat was lowered and carried to the left of its normal position between the 5th and 6th ribs, striking the walls of the chest three-quarters of an inch below the nipple and to the left, which fact raised a presumption that the organ was enlarged—hypertrophied. Percussion over the heart evinces dulness to the left nipple, this being beyond its natural limits. Auscultation discloses a murmur with the first sound of the heart at the apex, which extends around the left lateral region to the posterior portion of the chest.

It is deemed quite unnecessary here to go into further particulars with regard to the various sounds of the heart, as the principles which should govern us have been fully set forth in the history of the preceding case; besides a mere repetition would detract from the interest of both cases. From facts already promulgated there will be no trouble in arriving at the conclusion that here was a case of mitral regurgitation from incompetency of the mitral valves, finally inducing hypertrophy, congestion of the lungs, bronchitis, etc., from the receding current of the blood in the pulmonary veins from the left auricle. So far as the cause goes we are quite in the dark.

This I shall dismiss and take up the treatment. She took the following combination: ℞ Tincture Digitalis, Tincture Belladonna, $\overline{aa}$, ℥ ss, M. S. Dose, ten drops four times a day, four hours apart. It acted well.

June 3d.—Cough suspended, which I place solely to the credit of the digitalis and belladonna, for they regulated the circulation of the blood through the lungs, and resolution was the effect.

There is one interesting phase to which I wish to direct attention, as I have up to the present moment failed to notice it, though, by no means, in my opinion, insignificant. The patient's constant appeal was for ham; her mind continually dwelt upon this want. It had been interdicted and her good mother, naturally enough, was afraid for her to have it, and with all my persuasion, she doled it out very sparingly, though during many days it was not allowed at all. Here I must say nature, according to my observations of her pleadings—frequently her demands—is almost universally true to the system over which she so beautifully presides.

Having now disposed of the first branch of my subject, viz., some of the incurable diseases of the heart, I come to the second section, the position that *the curability of all acute affections is within the range of possibility.* Although structural diseases of the heart are recognized by all as incurable, their fatality has been much overestimated by the people. They cause great anxiety on the part of the sufferer, because persons now and then die suddenly of these affections, whereas the real mortality compared with the whole number thus sick is much smaller than might be expected.

But here I advance a step to take a survey of more encouraging fields for the work of the physician—I refer to the question raised concerning the restoration to health of all sick persons whose ailments are acute and brought on by temporary causes—all of which implies proper hygienic surroundings, coupled with suitable medication. Just here it is well to remark that the views which I entertain about the curability of all acute diseases, no matter how grave, have never been approved by any one to whom I have expressed myself on the subject. In May, 1873, before the Henderson Medical Club, I announced the following opinions, which, after mature reflection, I am constrained to reaffirm as being in accordance with reason, and the vast improvements in practical medicine in the last few years: *That the proper remedies in proper doses at the proper times would cure any acute affection.* It may be asked are there any exceptions, to

which I reply in the affirmative, the fulminant form of cerebro-spinal meningitis, among others, is an example; but what is meant is that when the patients are not killed outright at the first blow, but the maladies run the ordinary course of several days' duration where there are sound constitutions, for example yellow fever, cerebro-spinal meningitis, pneumonitis, small-pox, and a long list of diseases, including all acute inflammations, all fevers, whether zymotic or malarial, should end in recovery.

Doubtless, it may occur to the minds of my hearers what first suggested these thoughts. Many facts brought me to this conclusion. First, when I looked back to the fatal cases in my own practice, the thought came thundering away at my conscience, that if I had done so and so, as later improvements in medicine clearly required, my patient had not died; many times I have thought if I had the patient to re-treat, I would do some things quite differently, or in other words, change the treatment here and there, use remedies more heroicly, not at all, or more sparingly, or give some other remedy, or a combination of remedies. I do not wish to be understood as saying each acute complaint necessarily has its special panacea in some special drug; but the idea is, are there not specific courses of treatment that will restore the patient to good health, though impediments may be encountered on all sides?

Touching the position here assumed, I have had frequent occasion since I advanced these opinions, to ask physicians about their fatal cases, and many of them are frank enough to say they believe they have assisted patients in shuffling off their mortal coils. These admissions are made, too, by men of prominence, and in these instances there may be much truth in the maxim, "a full confession is good for the soul;" and I venture to say many who make no confessions whatever are lashed with the thong of guilty reflection over the untimely end of some poor creature who trusted his all to the skill of his physician, whose course brought pain, torture and death to the victim, and lamentation, sorrow and want to his family, with no other excuse than that he did the best he could—to my mind no excuse at all, for this is the plea of those steeped in utter ignorance, and the sooner they receive the rebuke of the profession the better it will be for mankind in general. It is our business to know and pursue the

right way. Whenever we do the best we can, and what we do is correct, then I say well done good and faithful servants. Station an incompetent engineer at his post on a steamboat, and when, from his neglect, the boat blows up, soon after becomes wrapped in flames, and half the passengers drowned, it will be an unsatisfactory excuse for him to say he did the best he could. So it is with physicians. Nothing short of *duty properly performed* will satisfy the demands of justice. It may satisfy the demands of the people, for they are far from being just on all occasions, but in such an event they must suffer from their own folly.

But I now turn from the dark to the bright side of the picture; the latter, too, has had its influence in bringing me to my present conclusions. All have heard of the perplexity of the unknown doctor, when called to see a patient with some slight complaint, naively remarked he could cure him, if he could only convert the disease into fits—epilepsy. I suppose this fable was merely intended as a rebuke to ignorance and presumption, for the two generally are linked together; but thanks to the advance in medical science in the last decade, this jest has been completely shorn of its mirth, for even fits are now being effectually cured all over the land. Prof. Wm. A. Hammond, the most eminent author in this country on Diseases of the Mind and Nervous System, reports in his work that of 286 cases of this dreadful malady treated by him, in 91 no fits occurred while taking the bromide of potassium, and in 65 there was no return of the terrible affliction after six months, but the other 26 had to continue the drug to prevent a recurrence of the paroxysms. As it has come to pass that even one-third of the cases of fits, epilepsy, can be cured, I fail to comprehend any good reason for disbelieving every patient suffering with an ordinary complaint cannot be cured. Is the proposition unreasonable or extravagant? I think not. And it appears to me not wrong to announce publicly that all patients affected with acute diseases should be rescued from death before old age prepares them to be gathered to their fathers, like a shock of mature and ripe grain to the garner, with the exception hereinbefore set forth in this article. I say acute, because the causes are temporary in their operations, and when removed, as they generally are in a short while, the dis-

eased structures should resume the normal state. This is not so, however, with chronic diseases, for the causes are perhaps chronic too, and may have been years in localizing the malady, in which slow process the system and its belongings have so far drifted from original health as to render relief in all impossible.

But I must be permitted to go a step further, for in discussing this subject with important data before me, which will soon be reached, I am encouraged to take high grounds on this vital question, and am not willing to be on the defensive, because there is too much at stake in the issue; too many vulnerable lives of men and women, as well as helpless children, at the mercy of a profession whose ranks are well filled with incompetent medical men for me to longer remain silent while many people are thus being slaughtered. While our homœopathic cotemporaries, stand by and let their patients burn up, so to speak, by relying, in many cases, on the futile effects of infinitesimals—a jet of spray to quench a Chicago conflagration—we are doubly guilty if we meditate wrongly, because we are adding fuel to the flames, and these hurtful facts are enough to make the blood boil in the veins of any scientific physician, for it is well known that it is not necessary to be qualified to practice medicine in the country, as the mere guesser is as apt to be trusted as the man of profound acquirements.

But let me turn to another picture for consolation. Let me turn to contemplate some authenticated records which bear directly on the subject, namely, the treatment of pneumonia by that eminent author, John Hughes Bennett, of Edinburgh. His success is unequalled in this or any other country. All must concede that his restorative plan of treatment was most excellent, because he cured all his patients. For fifteen years ending May, 1864, he cured 112 of 115 cases of pneumonia in the Royal Infirmary of Edinburgh; the three fatal cases were hopelessly complicated with chronic diseases. *All his uncomplicated cases recovered, a record unknown before in the annals of medical history.* From 1839 to 1849, ten years prior to the time when he took charge of the same Institution, of 648 cases of pneumonia treated by leading physicians in charge, 222 died. Why the contrast? Was Bennett's success mere luck? It is impossible. It is unreasonable. One cured *all*, the others let more than

one-third end fatally. This, too, was so abrupt in dates as to ascribe the difference in mortality to the difference in treatment. While it is not the object of this article to enter into details concerning Bennett's treatment, it will suffice to say that eight cases out of the 115 took doses of one grain tartar emetic, nine doses of half a grain, ten doses of one-fourth of a grain, and seven doses of a third of a grain. This is what he calls the restorative plan of treatment, but after all it is pretty active medication, not the stimulating plan as I have heard some say. The truth is, he uses diluents, salines and sedatives (tartar emetic, etc.) to diminish the viscosity of the blood, and when the pulse begins to fail, resorts to wine in sufficient quantities to give it volume.

And after presenting these stubborn facts, I offer still stronger proofs to substantiate these views. Prof. Fordyce Barker, with a large practice in the city of New York, has never lost a case of laryngitis (croup), whether simple, acute or pseudo-membranous, and he has had extensive experience in the management of this formidable disease in children. Is this success mere chance too? To say so is nonsense. As he cured all his patients that proves there is a way by which all other physicians can do likewise if they treat their patients on the same scientific principles. He treats the disease heroicly. He relies on turpeth mineral as an emetic, and controls the pulse, fever and inflammation by large doses of veratrum, carbonate of ammonia and quinine. In this we see sense, we see the disease jugulated, we see the highest type of rational medicine. How can the inflammatory process proceed destructively, if we subdue its active forces? Do these records prove nothing? If not, I am at a loss as to the worth of facts and figures. It is useless to argue any question. It is useless to contend that there is such a thing as a tenable position in any matter whatever. Again, I will take a case in which its gravity from its incipiency seems to exculpate the attending medical gentleman from any blame, as death was expected to follow the attack. Well, I offer this for meditation: if any physician of the 2,000 in Kentucky, of the 40,000 in the United States, of the hundreds of thousands in Europe, Asia or Africa, could have saved the patient, so should he have been saved by the one in attendance; for recovery points

to the way in which relief came, and where there is a way we must follow it. One may say the road is not clear at all places; true to the letter. Then it is our affair to make it clear; to blaze the way for those who may follow after us. Neither was there a way for Cyrus to enter Babylon until his towering genius made a way; neither was there a path in the Atlantic Ocean, when Columbus floated out into the unknown seas, and set sail for a new world, when people said there was nothing but water before him; neither was there any utilized vaccination before Jenner; neither was the circulation of blood known till Harvey discovered it in 1616, and neither had any physician walked right into the valley and shadow of death, and boldly erased from the death register the name of a recorded victim, dying of ovarian tumor, until Ephraim McDowell, in December, 1809, "dared tread Cimmerian deeps to seek and save that which was lost." But these stubborn facts convince us that if the beaten tracks already made by accumulated science and wisdom are dim or mostly obliterated, or fail to lead us to the goal, then we, as progressive men, as custodians of human life, must go forward making new roads which lead to health and old age.

Before McDowell established the operation of ovariotomy at the time specified, no poor woman suffering from ovarian tumor had ever been known since the dawn of creation to recover at the hands of a physician when thus afflicted; but the boon thus vouchsafed to womankind by his originality, by his skill and by his ability, has, by preventing death and ages of untold misery, added at least thirty thousands years of human existence to women in the United States and Great Britain in the last thirty years. Before 1809 every patient must die; after that time sixty per cent. must live, and some operators have gone as high as eighty or ninety per cent. in saving their patients. Was not such a change wonderful? Then too it was so sudden. Where has there been such a revolution in science? It would be hard to find. How was the news received? Many learned in the profession in this country and Europe, publicly discredited the written reports of McDowell's first three cases as they appeared in the *Eclectic Repertory and Analytical Review*, for October, 1816, although he was quite modest as he waited seven years from his first operation before he gave the facts to the world.

Some say they do not believe the reports of Bennett and Barker. Well, it is quite evident truths, great truths do not hinge on the opinions of mankind; else we would have error as often established as the truth. Their reports are as reasonable as McDowell's were, and their accuracy are beyond question.

Dr. Diett published, in 1848, an account of 189 cases of pneumonia treated by diet only, of which 14 died, or 1 in 13½. Would it be strange then that if 12 of 13 got well, when nothing was done but rely on food, that proper medication ought to save the thirteenth case, for surely that would be no extravagant demand of medical science? Bennett has nobly proven himself worthy of this confidence. So has Barker. It is estimated that in every hundred cases of sickness of active character, taken as they come, but four in one hundred would die if no medicines were administered at all. Does it not appear reasonable that medical science should step forward and rescue these four unfortunate cases? In view of the vast change in the result in ovarian tumors after 1809, I think the proposition very reasonable, as much less is required that all patients laboring under acute complaints should be restored to health, as only four per cent. perish, than in the former instance where the mortality was a hundred per cent. In one instance all died, in the other, four per cent., but when science came forward, when all died, and said from seventy to ninety per cent. should live, it should certainly say, where the death rate is only four per cent., that the patients should survive in all instances. So they will if they receive proper medication.

But it may be asked is it possible that all can get proper medication? This desirable end may never be realized as any body can readily understand; yet, at the same time, it is possible that many are powerful to command attention from those who rank foremost, and who should therefore, if my position be correct, be prepared to make good the theories just advanced. If there arise an objection or a supposed obstacle in considering such a felicitous possibility, I doubt not but it may be met by replies similar to those given in support of the plan of Christian salvation, which is, that if carried out all may be saved, and if it is not, the cause of failure lies not with the original plan, but rests with those who fail to practise what it has so eloquently taught.

If my propositions fail in practice it is not that they are incorrect or impracticable, but that our professionally accomplished men have neglected to inform themselves of all they should know. Such opinions may to some appear to proceed from an over-nice sense of the acquirements and abilities of our profession; but most will admit that it is but a higher development of that righteous indignation with which legitimate practitioners are wont to look upon the criminal impositions of empirics and quacks. These have thriven and prospered for hundreds of years, vending their nostrums, deceiving their victims, and lining their pockets with the hard won earnings of their dupes. Pre-eminently above all others does the physician appeal to the confidence of that circle to whom he has devoted his life work. Tortured by pain, wasted by disease, conquered by affliction, the stoutest looks to him for the help they cannot give themselves, and he above all others should least be "as a reed shaken by the wind."

If then such is the scope of the true physician, and such his corresponding responsibility, how wantonly culpable must be the man who disguises himself by the assumption of abilities and qualifications of which he is practically destitute. But there is yet a mediate class between those distinguished as being entitled to high consideration on account of their attainments, and those well known as humbugs and deceivers. I refer to those of our ranks who, imperfectly qualified, neglectful of their books, careless of the late information of science, are yet by reason of diploma and certificate of graduation, titled to practise among a class that would lend no countenance to the recognized quack. Perhaps to these is most culpability attributable, and they are most to be discouraged in their ignorant recklessness. Without doubt the best method of discouragement would be through an earnest anxiety upon the part of their superiors to aid as much as possible all means by which they may profit. Prominent among such means may be reckoned subscriptions to popular journals, the organization of country societies, a strict observance of our code, in all things a due regard for each other, and frequent interchange of thoughts, opinion and experience.

If then we all never attain to that millennial period where death may be robbed of his early victims, we may at least climb

high towards that plane, and lessen very materially our death rate from ordinary causes.

If my sentiments find approval from any of your number, I shall be glad to know they are not considered altogether chimerical simply because of their newness, and I am constrained to believe that their universal endorsement only depends upon accurate and mature consideration.

NOTE.—Since I sent my article for publication, the first patient on which it was based has died. A *post mortem* yesterday by Dr. J. H. Letcher, Dr. Ben. Letcher, Dr. J. D. Collins, Dr. P. Thompson and myself, revealed disease of the heart. This is fourteen months after the case was diagnosed. We found the aortic valves calcified, and the orifice so hard and small that it would not admit the little finger. The mitral valves had calcareous deposits in them also. The wall of the left ventricle one and one-quarter inches thick. The heart was eight inches and a half long, thirteen in circumference, and weighed about 26 ounces (avoirdupois), all of which confirms the diagnosis I made months ago. J. L. C.
July 26, 1875.

ART. II.—*Post Mortem Parturition, with a Case.* By WILLIAM W. MURRAY, M. D., Professor of Materia Medica and Therapeutics, College of Physicians and Surgeons, Baltimore, Md.

The following case is recorded, not because any lesson of practical value can be learned from it, but because of its rarity. Other cases of the same kind have been reported, but they are not of such frequent occurrence as to render this one uninteresting:

On the 18th June, 1872, I was called to see a colored woman, æt. 28 years, pregnant with her sixth child, and very near to full term. First saw her at 10 o'clock P. M., and found her in a state of coma, respiration stertorous, pulse very quick and feeble. A vaginal examination was at once made, but afforded a negative result. The os was high up, though easily reached, and undilated. There was no indication whatever of labor having begun. The comatose condition became more and more profound, until death closed the scene, which occurred at 4 o'clock A. M., on June 19th, just six hours after my first visit. If I had been present at the moment of dissolution, Cæsarean section would have been performed with a view to saving the life of the fœtus.

The history of the case, obtained from the mother of the deceased, was as follows: About 9 o'clock A. M., on the 18th, while engaged in her regular work of washing at the house of her employer, she fainted, but soon recovered herself, and re-

sumed her work. In a few moments, however, she was seized with an attack of vertigo, so that with great difficulty she could maintain her equilibrium. The vertigo partially passed off in a short time, and she concluded to go to her own house, which was about two hundred yards distant, and with the assistance of the neighbors she was enabled to reach her home. On the way, however, she was seized with a convulsion, and during the remainder of the day she had as many as fifty convulsive attacks, the last one having occurred at 6 o'clock P. M., four hours before I was sent for. She died, as stated, at 4 o'clock A. M. the next day (June 19th).

On the 20th June, at 10 o'clock A. M., while the attendants on the corpse, previous to its interment, were quietly seated in the room, their attention was attracted by a *gurgling noise*, as if some fluid was escaping from the body, and on turning back the grave clothes the fœtus was found in the bed, with only the lower extremities undelivered. This occurrence frightened those who were present. I was immediately sent for, and found the condition of affairs as just given.

Several hypotheses have been advanced to explain the occurrence of the remarkable and comparatively few cases of expulsion of the contents of the uterus after the death of the mother. Each theory may have had an illustration of its correctness in cases that have occurred, but I do not think that any with which I am acquainted—unless, indeed, it be that of Velpeau (as we shall see presently)—even approximates to an explanation of the case under consideration.

Dr. Tyler Smith, while he believes that reflex action of the uterus, which may continue some time after death, may, in some instances, be sufficiently powerful to expel the uterine contents, does not think that this is the explanation of the majority of such occurrences, but attributes them to a peristaltic contraction of the muscular fibres of the womb. Leaving out of view the length of time (30 hours) which elapsed between the maternal death and the birth of the fœtus, it is very questionable if a peristaltic or vermicular contraction of the uterine muscular fibres can at any time be so powerful as to extrude the contents of the womb in the ninth month of gestation.

Brown-Séquard advanced what he believed to be an explanation of this post-mortem contractibility of the womb. He "observed movements in the uteri of recently killed animals

whose spinal marrow had been destroyed throughout its entire length. These movements, which could not be attributed to reflex action, since there was no opportunity for the exercise of nervous influence, were due simply to the contact of non-oxygenated blood with the uterine fibres." He injected venous blood into the uterine vessels of a pregnant rabbit, and immediately the uterus began to contract, and two or three fœtuses were expelled. Again, he destroyed the spinal marrow from the sixth rib to the sacrum, in two guinea pigs which had reached the end of gestation; yet labor began and ended shortly after the blood was cut off from its supply of oxygen by the application of a ligature around the trachea. From these observations and experiments he was led to believe that contractions of the uterus after death are due to the contact of venous blood with the uterine fibres acting as a stimulant upon them. However simple and plausible this explanation may be, manifestly it could, in any event, apply *only* to those cases in which the fœtus was expelled shortly after death, and not to a case like the one now recorded, in which venous blood had been in contact with all of the tissues for thirty hours.

Again, it has been supposed by some that the phenomenon under discussion may be caused by movements of the fœtus itself; and indeed, these cases have been adduced by those who maintain that labor is produced or brought about by the fœtal movements as evidence in support of their theory. We are not now concerned with the cause of natural labor, but if we could believe that even a *live* fœtus could aid, by its movements, in its own expulsion, the fact that the one here referred to had been dead at least thirty hours would prove that it certainly was a passive agent, and in nowise accountable for its birth.

It has been said that the death of the mother in such cases may have been only *apparent*, and that possibly *real* death may have taken place just at the time of the expulsion or immediately after that event. Whether this be true of any of the cases recorded by others, it is impossible to say; but that *real* death occurred in this instance thirty hours *before* the birth of the fœtus, is beyond doubt.

Velpeau believed that when the expulsion of the fœtus was postponed until two or three days after the death of the mother,

labor must have been well advanced at the time of dissolution, and that the uterus was mechanically compressed, and its contents thus forced out by the rapid generation of gas in the intestines.

One of the conditions upon which Velpeau's theory was predicated was present to a very marked degree in my case; at the time of the expulsion of the fœtus the intestinal canal was enormously distended with gas. And if there was any evidence to render it even *probable* that labor began and became well advanced (an occurrence by no means impossible) during the six hours which elapsed between my first visit and the time of death, I should not hesitate to adopt Velpeau's theory as the true explanation of this interesting case. In the absence of any positive evidence to the contrary, is it not probable that labor did begin and advance very considerably during the time above specified (although there were no indications of it up to that time), thus establishing both of the conditions necessary to an explanation of the occurrence on Velpeau's theory?

ART. III.—*Puerperal Fever.* By ROBERT J. PRESTON, M. D., Abingdon, Va.

An article in the April number, 1875, of the *Monthly* on *Child-bed or Puerperal Fever* attracted my attention, and its careful perusal has aroused, or rather revived a deep interest which was excited in my mind a few years ago, by some severe cases coming under my care. And I desire now to give expression to a few thoughts or convictions upon the same subject which have been impressed upon my mind by the teachings of some modern authors, and fully borne out and corroborated by my own experience, both in hospital and in private practice. While these views may be somewhat different, or at variance with those expressed in said article, yet I desire by no means to be understood as criticizing or even commenting upon the views of the distinguished author, whom I have ever been taught to look upon and revere as a Father in medicine, and of whom we Virginians justly feel proud.

Puerperal fever is indeed a fearful malady; and its "great fatality appeals equally to the science and sympathy of the entire

medical profession;" and has, especially of late years, awakened an interest and a zeal in its investigation, which has resulted in marked improvement, both as to prophylaxis and treatment, which promise at no distant day to do away, in a great measure, with the terror of this disease, and cause it no longer to be looked upon as an opprobrium of the healing art. It is true, I think, as shown by the various names under which it has been described, that our science has not as yet arrived at any certain or definite conclusions as to the nature, pathology, &c., of this disease; but much has been, and is now being done to elucidate these vexed questions, and to remove the pall of darkness and of terror with which they have been veiled, even from the most skillful and scrutinizing research.

Then what is puerperal or child-bed fever?—what its pathological lesions and character? One distinguished author tells us "that it is an essential fever, a special disease, typical in itself —a toxæmia peculiar to the puerperal state; that its lesions may be various, as metritis, peritonitis, or phlebitis; any or all of these phlegmasiæ may co-exist with it; or puerperal fever may exist without any of these in its most violent and fatal form, and then lesions are entirely absent." Another writer* tells us that the name itself embodies error, "that there is nothing essentially puerperal known in it, nor is there anything of the nature of a fever, as the term is generally understood." Pyæmia, septicæmia, toxæmia, bacteræmia, &c., are some of the names under which this disease has been known and described. But most pathologists will agree as to the correctness of the opinion entertained by Pennertus and Riverius, viz: "that puerperal fever is a blood disease arising from the absorption of a virulent poison into the system, which is communicable from one individual to another, and may also be inhaled from the atmosphere." What this virulent poison is, is a question still *sub judice*, notwithstanding the many able and scientific researches of late years; and notwithstanding the bright hopes and interest awakened by the discovery of bacteria, as the supposed *materies morbi*, and the learned dissertations and beautiful theorizing consequent thereupon. As to the necessary incubation of this poison in the sys-

*Dr. J. Matthews Duncan, *Obstet. Jour. Great Britain and Ireland*, Sept., 1874.

tem, there is much discussion and much disagreement; and there is marked variance as to the violence of the invasion in different cases, from a slow, gradual development in some, to a sudden, violent and rapidly overwhelming attack in others.

These discrepancies or differences in the history of different cases are best accounted for, it appears to me, by noting the distinction, as suggested by Dr. Goodell,* between the autogenetic and heterogenetic forms of the disease. In the *autogenetic* form "the woman is poisoned by her own lochia, which have become gradually offensive from decomposition, and that not until many hours after delivery. By this time the lesions of labor have begun to suppurate and granulate, and these granulating surfaces being weakly absorbent, the poison is received into the system by small instalments, and hence these cases are more gradually developed and more manageable." In the *heterogenetic* class, "the poison, in a high degree of intensity, is brought from without in direct and early contact with raw surfaces while they are fresh, and, therefore, actively absorbent, and being largely taken into the system, gives rise to the sudden violent and fatal forms of the disease."

Taking this view of the septic origin of the disease, how often this condition—this septicæmia—in its mildest form passes unnoticed, or without special attention, we cannot say; but that milk-fever (so-called) is but a slight septicæmia, due to absorption to a slight extent of the offensive lochia, we have but little doubt, for where strict antiseptic treatment is pursued, there is no milk fever present.

"The series of symptoms," says D'Espine,† "in puerperal septicæmia are more or less severe, according to the dose of the septic material absorbed by wounds on the walls of the utero-vaginal canal, and these symptoms present nothing special to the puerperal condition, but may be assimilated to those of septicæmia in wounded subjects or animals."

The uterine lymphatics are the habitual roads of the absorption of this poison, and uterine angeioleuceitis and mild perimetritis are frequent but not necessary indications of its passage. The intimate relation and connection known to exist often be-

Amer. Jour. Obstet., No. 25, p. 164.
†*Loc. Cit.*, No. 21, p. 150.

tween puerperal fever, erysipelas, and examination of the dead body would indicate some common or similar nature of the poisons. And is it at all unreasonable to suppose that the poison of the decomposing dead body is not at all different from the poison of the decomposing lochia, or retained shreds of membranes or placenta undergoing decomposition within the uterus? The production of the same disease would certainly argue a like nature of both poisons, as I verily believe to be the case. And the enormous development of bacteria in these decomposing tissues, and their presence in septicæmia—though not so definitely and certainly significant as at first supposed—go far toward elucidating the phenomena of this disease, and bring to light the *materies morbi* which generate and cause the same.

We have touched thus hurriedly upon some of the points in the pathological discussion of this subject, in order that we may more clearly set forth some of the indications of treatment—both prophylactic and curative, which we have been accustomed to follow, and from the carrying out of which we have obtained some measure of success. It is unnecessary to the scope and purpose of this article to go into a narration of the various symptoms of this disease, and to discuss the sudden and rapid variation as to temperature and pulse, the presence or absence of the *sweetish odor* of the breath, &c.; but we will address ourselves more especially to the treatment that we deem best adapted to these cases, and generally most successful.

First as to *prophylaxis;* for it is in this that we have the greatest advantages in contending against the disease, and it is here that we must still look for our greatest success. The strictest cleanliness and most perfect ventilation should be insisted on; and as has been the practice in the lying-in wards of the "Nursery and Child's Hospital," New York, each individual should use antiseptic vaginal washes (of carbolic acid, Labarraque's solution, &c.), both before and after delivery, but especially after—twice daily, in order thoroughly to cleanse away the lochia and thereby prevent their retention and decomposition. If the slightest offensiveness of the lochia be noticed, or the slightest disturbance of the system indicating a threatening septicæmia or milk-fever, these antiseptic injections should be carried to the fundus uteri, and made to thoroughly wash out the entire utero-vaginal canal.

In this way I have frequently seen lumps of decomposing and extremely offensive matter removed from the uterine cavity, and have often felt that I had thereby removed (in part at least) a dangerous source of poison, and have been gratified to see in such cases an immediate abatement of threatening symptoms.

These together with other antiseptic measures applied to the wards or rooms, bedding, clothing, etc., of the patients, will, I doubt not, tend in a great measure to ward off this dreaded disease. All these measures of course should be used in connection with and in addition to all proper attention to the functions of the body, and the woman's general health.

As to *curative treatment* after the disease has fairly set in, this should be eliminative and supportive. Purgatives or laxatives, diaphoretics, diuretics, &c., should be used, especially in the early stage of the disease, to keep up the functional activity of the different excretory organs of the body. Vascular excitement should be controled by veratrum viride, aconite, &c. Pain, restlessness and nervous irritation by anodynes and opiates; tympanites, tenderness, &c., over abdomen should be relieved by turpentine stupes three or four times daily, followed by bran or linseed poultices, hot fomentations, &c., covered by oil-silk. The vital powers should be sustained until the disease is exhausted by the use of a nutritious diet, as milk, eggs, beef tea, egg-nog, milk punch, &c., as much as can be assimilated. Quinine and other tonics should be given freely, and stimulants administered early and freely in proportion to the exigencies of the case.

In cases where peritonitis, metritis or some of these phlegmasiæ have been associated with the disease, (and this is so in the majority of cases), I have been cautious in the use of purgatives, feeling that rest here, as in all inflammations, best conduced to recovery—and have endeavored to effect the elimination of the poison through other channels equally as efficacious and yet not so dangerous or perturbing to these inflamed parts as purgatives necessarily are. In these cases I have used freely the opiate treatment, as recommended by Dr. Alonzo Clark, in peritonitis, and I have been induced to believe—paradoxical as it may seem—that this is one of the best methods of elimination in most of these cases, viz: to bring about a condition of semi-narcotism, or thorough relaxation in the patient. Most clinical observers

have doubtless often noticed the effect of this treatment in bringing about profuse diaphoresis to an extent that no other means will accomplish. This I have noticed independent of the profuse sweating which is a symptom of this disease, and which is I think but a salutary effort of nature towards relief.

Although I have never seen any views expressed upon this action of morphine or opiates, I have yet been strongly impressed by observing it in my clinical experience, and have been convinced in a great degree of the extent and efficiency of this mode of elimination where the indications are such as we have in this class of diseases. Of course I have not and would not use this method of treatment alone in the carrying out of this indication, but have used in addition other remedies directed to this end. Where an indication of treatment is properly fulfilled, it matters not so much what the means or remedies are by which it is accomplished. If we extinguish the fire that is consuming the house, it matters not whether we use water or carbonic acid gas.

There are some cases however of puerperal fever or septicæmia, which would not be at all amenable to this opiate treatment, as the sudden overpowering of the system would give no time, and would contra indicate such a procedure.

I would like to add the history of some cases taken from my practice in order more fully to illustrate the views and principles of treatment which I have endeavored to set forth; but space does not allow. I hope, however, this paper may serve at least to arouse an interest, and awaken a further investigation by abler minds into the nature and treatment of this dreaded malady.

ART. IV.—*Cholera Infantum.* By H. WYTHE DAVIS, M. D., Richmond, Va.

Probably there is no disease in the whole domain of medicine in which the general practitioner feels a deeper interest than that of cholera infantum, both on account of its severe nature and the character of the subjects affected by it. Therefore, it becomes us to investigate most thoroughly and carefully all facts that promise to throw additional light on a plague so terrible and disastrous to infantile life. Such seems to have been the object of the article that appeared in the July No. of the *Va.*

Medical Monthly, under the caption, *Cholera Infantum*, by Prof. O. F. Manson, M. D.

We must dissent to the views therein expressed as regards the history and etiology of the disease he treats of, as not sustained by authority and facts. The concurrent testimony of the most eminent medical writers, both of America and Europe, is in direct opposition to Dr. M's "new pathology." This "new pathology" seems to be but the revival of the old theory advocated many years ago by Drs. Rush and Condie,* ascribing the cause of cholera infantum to malaria. There is abundant evidence, both American and foreign, which we will adduce to show the unreasonableness of such a theory. As regards the history of cholera infantum, Dr. M. uses these words:

"It is a source of deep regret that the literature of such an important disease should be so meagre. I have been unable to obtain any satisfactory information concerning it from any *European source*. If it exists among these authorities, it has eluded a very careful and earnest research. So little, indeed, have I found in *European works* on the subject of diseases bearing a remote resemblance to cholera infantum that I have been led to doubt the *existence of the malady in any of these countries*. If it appears there at all, it must occur sporadically, and not, as in this country, as an annual devastating epidemic disease. If a disease so frequent in its occurrence, so wide-spread in its prevalence and fatal in its consequences, were found in or about the *great capitals of Europe*—the centres of medical learning and the fecund source of authors—we should, ere this, have had numerous and extensive treatises upon the subject. On the other hand, we have a *few* good descriptions of the phenomena and anatomy of the disease from American writers, by whom it is generally regarded as essentially an *American disease*." (Italics ours.)

It is most wonderfully strange that Dr. M., in his "very careful and earnest research," should have overlooked Trousseau's *Clinical Medicine*, vol. IV, which contains a lecture of 15 pages on cholera infantum. I quote in part:

"Some days ago, when we were getting into the very hot weather, I said that most probably we should not be long without seeing cases of the disease which, in France, is called '*choléra infantile*,' and which American physicians have described under the name of '*summer disease*.' My anticipations have

*Dunglison's *Practice of Medicine*, vol. I, page 148.

been only too completely realized. The day before yesterday, a child who occupied bed 13 of our Nursery ward, died after having suffered for a short time from this disease. I accept the name '*cholera infantile*,' because its use has been ratified by long custom, and because I am opposed to the introduction of new names, when the old ones are *familiar* and *well understood*. Were it not for these reasons, I should prefer to call the disease by its American name, because I think it is much more appropriate. *** The *influence of season*, which, in America. has given this affection the name of 'summer disease,' would appear to be its *principal cause*, irrespective of that which belongs to the individual. *From the earliest ages this disease has been observed;* during the hot season *it appears every year in every country.*" (Italics ours.)

Let this suffice for the present from such a distinguished author. The reader will find in the interesting lecture above referred to, a detailed account of the dietitic management of cholera infantum by a Russian physician, Dr. Weisse, of St. Petersburgh, who more than thirty years ago introduced to the notice of the profession, the use of raw meat in this disease. We all are familar with this judicious feeding in certain stages of cholera infantum at the present day. Dr. M. evidently never fell upon the classical memoirs on this subject, by Dr. Rilliet, Clinical Professor at Geneva, which were published more than twenty years ago in the *Gazette Medicale*. As if more earnest to make this an American disease exclusively, Dr. M. further on in his article says: "That this disease does not prevail in the *great cities of Europe*, is proven by the fact that *their writers* do not *mention* it or *describe any disease* that *corresponds* with its *symptoms*." As if to prove this too bold assertion, he refers to a foot note in these words:

"In treating of the severer forms of diarrhœa in which '*death takes place in a few hours.*' Dr. West, the distinguished London writer says, that *he* has 'never seen an instance of it himself,' but that this *rapidly fatal termination* is far from unusual in the Southern States of America, where diarrhœa under the various names of cholera infantum, the summer complaint or gastro-follicular enteritis, annually destroys many thousands of children." (Italics ours).

We thank Dr. M. most heartily for the reference to such distinguished authority to disprove his (Dr. M's) own statement. We

have no doubt whatever but that Dr. West was in earnest when he said that *he* has "never seen an instance of it *himself*" in which "*death takes place in a few hours.*" But he does not say that he has never seen *this disease* at all, though *he*, as no doubt, Dr. M. and many hundred others, can say that they never saw death occur "*in a few hours.*" We must be pardoned for quoting Dr. West's valuable lecture on this disease at some length, as we promised to refute Dr. M.'s "new pathology" on history and facts. The distinguished London physician describes this disease by the name of inflammatory diarrhœa; and as there are so many synonymes for it, he has a right to his, so that the description corresponds with that of others. In his work on *Diseases of Infancy and Childhood*, 2d Amer. ed. pp. 388–390 he says:

"*The symptoms of inflammatory diarrhœa* sometimes become developed very gradually out of what had seemed at first to be nothing more than a simple looseness of the bowels; but, in the majority of cases, they present, almost from the outset a graver character than those of simple diarrhœa, and are associated with more serious constitutional disturbance. When the attack comes on suddenly, it often commences with vomiting; and though in many instances the sickness does not recur frequently, yet, sometimes the irritability of the stomach continues, for twenty-four or forty-eight hours, to be so extreme, that every drop of fluid taken is immediately rejected; and that frequent efforts at vomiting are made even when the stomach is empty. Violent relaxation of the bowels occurs almost simultaneously with the vomiting; and the child sometimes has as many as twenty or thirty evacuations or even more in the course of twenty-four hours. The motions are at first fœcal; but they soon lose their natural character and become intermixed with slime, often streaked with blood. At first they are abundant and are often expelled with violence; but before long they become scanty, though sometimes they gush out without much effort on the part of the child. The character of the evacuations again changes; in the severest cases they not only lose their fœcal appearance, but become like dirty-green water with which neither blood nor intestinal mucous is intermingled. Usually however when the first violence of the purging has a little abated, although some serous stools may still be voided, yet the evacuations consist chiefly of intestinal mucus, intermixed with a little fœces and more or less streaked with blood. These scanty mucous stools are generally expelled with much straining and difficulty; a few drops of blood

sometimes follow them: and once or twice at an early period of the attack I have known an infant void as much as a tablespoonful of pure blood. The constitutional symptoms which accompany an attack of this description, are usually very severe; the skin becomes dry and very hot, though unequally so; the pulse is quickened, often very much so; the head is heavy, the child fretful and irritable if disturbed, though otherwise it lies drowsily in its nurse's lap, with its eyes half open and scarcely closing the lids even when they are touched with the fingers. Now and then, too, the disturbance of the nervous system at the commencement of one of these attacks of diarrhœa is so considerable, that a state of excitement alternates with one of stupor, that convulsions seem impending and that there are distinct carpopedal contractions or startings of the tendons of the wrist or forearm. The abdomen is usually full and rather tympanitic, but seldom very tender; nor does the child seem to suffer much pain, though sometimes a degree of tormina appears to precede each action of the bowels. The tongue at first is moist, coated slightly with mucous fur; its papillæ are often of a bright red, as are also its tip and edges; while, if the disease continues, the redness becomes more general and the tongue grows dry, though it is not often much coated. The thirst is generally intense, the child craving for cold water, and crying out for more the moment the cup is taken from its lips; and the thirst is quite as urgent even in those cases, when the stomach is so irritable that it immediately rejects whatever is swallowed. There is scarcely any affection in which the loss of health and of flesh is so rapid as in the severer forms of diarrhœa, and a period of *twenty-four hours* will in some cases suffice to reduce a previously healthy infant to a condition in which its eyes are sunken, its features sharp, its limbs shrunken and its strength so impaired, that, though *I have never seen* an instance of it *myself, I can yet well understand that death* may sometimes take place in the course of a *few hours* from the commencement of the attack. This *rapidly* fatal termination is far from unusual in some of the Southern States of America [of course Dr. W. does not mean to say that the disease does not occur in some of the Northern States of America, but the *rapidly* fatal termination may not occur there], where diarrhœa under the various names of cholera infantum, the summer complaint, or gastro-follicular enteritis, annually destroys many thousands of children. A *rapidly fatal* termination, however, is not that which is in general observed in *this country;* but, how urgent soever the symptoms may have been, there is in most instances a spontaneous subsidence of them in the course of forty-eight hours at farthest; or a measure o

abatement of their severity follows the use of remedies. The sickness entirely ceases; the bowels act much less frequently, probably not above ten or twelve times in the twenty-four hours; but they act irregularly, five or six evacuations being passed within an hour or two, and then no action of the bowels occurring for four or five hours together. The appearance of the motions likewise varies and apparently without cause, being mucous, green, watery, intermingled with blood, all in the course of a single day and with no accompanying modification in the infant's symptoms. The tenesmus in general continues; and in weakly children or in those who have previously suffered from diarrhœa, prolapsus ani not infrequently occurs—though this accident happens less commonly in infants than in children of two or three years old. There is much uncertainty in the further course of the affection, and in the way in which it tends in one instance towards recovery, and in another to a fatal issue. Many fluctuations generally interrupt the progress of those cases which terminate favorably, while when it eventually proves fatal, the affection often assumes a chronic character, and does not end in death until after the lapse of several weeks." (Italics ours.)

There is certainly no ambiguity in the above language as descriptive of the disease, and it wants nothing but the bare name of cholera infantum to render it a complete resumé of that disorder.

Additional evidence, if needed, that this disease exists in foreign countries can also be found in Prof. Flint's *Practice*, in the following words: "The affections embraced under the name cholera infantum *are not*, as already stated, *peculiar to America*, but they doubtless prevail to a much greater extent in certain parts of this than in Europe, owing, probably, in a great measure, to the *heat* in the *summer months* being greater than abroad." (Italics ours.) In the chapter, covering thirteen pages, from which the above is taken, such frequent mention is made of prominent French and German physicians as to leave no shadow of doubt as to their perfect familiarity with cholera infantum. It is unnecessary to dwell longer on the history of this disease in this connection, as we will have to refer occasionally to its history in discussing the second part of our subject.

Therefore we pass on to the consideration of the etiology of cholera infantum. Dr. M. claims that his "very careful and

earnest research" has found no hypothesis heretofore offered, sufficiently sustained by facts to entitled it to his confidence; and therefore upon a long and serious reflection, he is satisfied that the *sole* origin of cholera infantum is malaria—such malaria as produces intermittent fever. His conclusion is based on the following reasons:

"1. It is a *febrile disease*, and this fever, in a majority of cases, is of a marked *periodical* character, characterized by morning remissions and evening exacerbations, and in some cases is *positively* of an *intermittent* type.

"2. It prevails chiefly, and, I believe, *solely* in localities in which the ordinary forms of malarial fevers prevail, &c.***

"3. Other symptoms of cholera infantum strongly resemble those found in some of the forms of pernicious fever occurring in persons beyond the infantile age, &c.***.

"4. Both diseases prevail in the same seasons. Though periodical fever may appear at any season of the year, yet it is well known that it usually makes its advent with the warm season, and usually disappears, in a great degree, after the appearance of frost.

"5. As will be seen it is cured by the same *remedies* which are *universally recognized* as potential in the treatment of all forms of periodical fever.

"6. The great tendency to sudden and spontaneous relapse observable in the recognized forms of malarial fever, is equally as conspicuous in cholera infantum. In no other diseases with which we are acquainted are relapses so frequent as in these—certainly in none prevailing in this country.

"7. Negative arguments are not wanting to support this view of its etiology. To what other cause can be attributed it existence? It is not due solely to heat, or else we should find it prevalent in the same latitude in this country, especially in the non-miasmatic districts. It is not produced by overcrowding or animal exhalations, for it is *unknown* in the *largest* and most densely populated cities of the world, as in *London* and *Paris*." (Italics ours.)

Before considering these various heads, we would remark, *en passant*, that dentition, considered in its physiological sense, is a state attended by such signs, under the laws of nature which are of themselves not incompatible with health. It is in fact a natural process, attended however by discomfort to the child, and predisposes it to various diseases when the proper excitants are applied. It is during this normal state that every care in avoiding

improper food and every precaution against unwholesome air should be observed to prevent a system, already susceptible, from taking on abnormal action.

As in winter or cold season the teething child is liable to affections of the air passages, so in summer or the hot season it is prone to disorders of the gastro-enteric system. The coryza or simple catarrh is no more a disease of the teething child than the simple diarrhœa in summer. It is when some extraneous cause —some excitant affects its already sensitive nature that disease presents itself. We think the period of dentition has its parallel in the case of the pregnant woman who experiences more or less uneasiness during the gradual development of the fœtus, as indicated by the various signs of pregnancy, which it is unnecessary here to mention. Her system, too, like that of the teething child, is made sensitive both as regards her mental and physical nature, which renders her liable to peculiar diseases when certain excitants are applied. This train of thought might be continued to her accouchment and its subsequent period, but let this suffice.

Now, as regards Dr. M's first reason for referring cholera infantum to malaria, we will say that we do not recognize in this disease that interval of time at the end of which the same symptoms again present themselves—a state that we could with almost certainty anticipate, whether it be at a certain hour of a day or on certain days. This state we call periodicity is no better represented than in intermittent fever of whatever type it may be. We know too well the variableness of the symptoms of cholera infantum during the twenty-four hours and in two succeeding days. But we can account for these changes both by the influence of day and night on this as on all diseases and the agencies used, if they be only such as to secure rest and comfort to the little sufferer. It is well exemplified in the simple stomatitis and slight injuries that young children sometimes receive. The approach of night invariably brings on restlessness, fretfulness and even a feverish state. This is certainly not a state of exacerbation as we should look for in intermittent fever; and then as the night advances with that peculiar influence it possesses, "nature's sweet restorer, balmy sleep," is induced, even though it may be slight and interrupted, the little child at the approach of dawn brightens up and looks improved. Shall we call this remission?

If these be exacerbations and remissions in cholera infantum we could almost produce them at will. To produce the first, the withholding from the child of cold water or drink that an insatiable thirst demands, as is evidenced by its outstretched hands and its eager eyes glaring deep from their sockets, is sufficient. To produce the second, the gratifying of this demand by drink, even though it may be rejected almost in an instant, brings quiet and sleep for a while at least, though they be followed again and again by a state of distress. That peculiar shriek attended with hot head finds some relief from the stimulating pediluvia and other soothing agencies. As cholera infantum has neither remissions nor exacerbations as an inherent quality of the disease, so it does not present that intermittent quality that would class it with those diseases that regulate their own periodicity.

In reply to the second reason for ascribing cholera infantum to malaria, we could offer no better rebutting testimony than the words of Prof. Wood in his Practice, p. 667.

"The main cause of cholera infantum is *undoubtedly* a combination of *heat of weather*, and the *impure air of cities*. Neither of these causes is alone sufficient, for the disease does not occur at an equal or even greater elevation of temperature in country places; nor in cities during *cold weather*. The peculiar condition of the air generated in *crowded population* appears to be essential, as even *miasmatic districts* in the country are exempt. It is true that miasmata have been supposed to favor the disease, but this is *contrary* to the personal observations of the author; and it is a *well known fact* that our *autumnal fevers*, which are universally believed to be of miasmatic origin, *scarcely ever penetrate the densely built portions of our cities*, where cholera infantum is most rife. It is indeed one of the greatest scourges of our *large cities*." (Italics ours.)

Again we find in Prof. Dunglison's work, p. 148, these words:

"It is *not probable* that it is produced by the *malaria* that gives rise to fevers. It certainly is *uncommon in localities* in which *intermittent* and *remittent fevers* are *annually* and *extensively endemic*. (Italics ours.)

We refer especially to Condie, Eberle, Flint, and we might add many other American writers who assert in the strongest language possible that cholera infantum is a disease *peculiar* to "large cities and towns," and who speak especially of its severe

character in Philadelphia, New York and other large cities. Are these localities proverbial for malaria? Do we find cholera infantum prevailing there to an equal extent with intermittent fever?

In relation to this subject we might well consider the situation of our own city. No one will question the great prevalence of cholera infantum in Richmond during this present hot season, beginning about the middle of June; and yet to the reflecting physician it will appear that since that time there has been an unusual absence of true intermittent fever even in certain localities where it had been wont to appear during previous summers. Shall we call Richmond a *hot bed* for malaria? We are quite familiar with certain districts of the environs or annexed portions of the city, and can bear evidence to their malarious character, but as can be ascertained from the reports of the Board of Health, the mortality from cholera infantum is as severe, if not more so, in the old portion of the city where malaria, I believe, is unknown, as it is in these districts. Recently we have been informed by a prominent physician of this city, who for twenty years practised in Orange county, Va., that, there in the vicinity of the Southwest mountains, cholera infantum was not uncommon, and that intermittent fever was unknown there. He states that in the past eight years (the time he has been absent from his native place) he has heard of some malarial fevers appearing there. Several other accounts similar to the one above could be cited as coming from well known physicians of our city.

While on this point, we must again refer to that distinguished physician of Paris, Trousseau, for his views on the disease that Dr. M. *attempted* to show was indigenous to America. Trousseau says that in his city intermittent fever (which is ascribed by all to malaria) is of such rare occurrence that physicians there hardly recognize it, and yet cholera infantum appears at every returning summer season which, he insists, is, in connection with other conditions, the cause of it. We can refer to Billard as entertaining the same views as expressed here by Trousseau. But this array of testimony after all appears to us unnecessary to prove the non-malarial character of cholera infantum, for the argument that the disease is due to malarial causes is refuted by Dr. M's own language; for in those countries of Europe

where malarious diseases prevail in their most violent forms, according to *him* no cholera infantum exists, while if his argument were true the reverse would be the fact.

To the third reason, we answer that it would be as reasonable to ascribe to cholera infantum the same cause that produces the exanthemata, because there appeared to be a similarity in some of their symptoms, as to make it a product of malaria on account of a remote resemblance it bears to miasmatic fevers. If our diagnosis in this disease were based on similarity of symptoms, we should expect its origin to be the same as that of Asiatic cholera.

To the fourth reason, we would say that both diseases, though they may exist as a coincidence at the same season, *certainly* do not *begin at the same time*. We find cholera infantum most prevalent in June, July, August and September, whereas intermittents occur most invariably in the early spring months (vernal endemics) and later in the fall (autumnal endemics)—the former much milder than the latter. We need hardly remark that, by reference to the various reports of cities, the severity of cholera infantum as indicated by its diminished mortality, becomes less as we approach the fall season.

To the fifth reason, the denial can be found by examining the remedies for cholera infantum in Dr. M's article, which *he claims* are so "potential" in the treatment of all forms of periodical fever; but we are not disposed to rest the answer altogether on that. By reference to the articles on this disease by Flint, Dewees, Dunglison, Trousseau, Billard and others, we do not find a word in their treatment of this disease about quinine and other remedies that are so "potential" in intermittent fever. It appears that minute doses of calomel or hydrargyrum cum cretâ, stimulants, proper feeding and revulsives, form the basis of their practice. The first named author urges early removal from the city as the most efficient of all curative means. He says that if this measure is not too long delayed, it rarely fails. Dr. Dunglison states, in his work on *Human Health*, page 114, that Dr. Rush asserted "that he knew of but one instance of an infant being affected with the disease which had been carried into the country to avoid it." No medical man would remove a case of acute intermittent fever from the city to the country

with the view of curing the disease. We know how invariably the tendency is in intermittent fever to a recurrence of the attack every seven, fourteen or twenty days, and that it becomes necessary, for the successful management of it, to continue some antiperiodic treatment in anticipation of such periods. Is any such treatment as this necessary in cholera infantum? We are sure that almost a concurrent opinion would sustain the practice, either as a prophylactic measure, or as curative means, to remove the infant, if possible, to the country as the best treatment.

The sixth reason has its answer somewhat in the foregoing one. These so-called relapses are, we think, rather other attacks supervening upon the previous one in consequence of another tooth going through its development, or a re-application of the agents that gave rise to the first attack.

To the seventh reason, there is evidence enough to satisfy any candid mind, and it may be fully gleaned from the authors quoted in the beginning of this paper.

Though this completes the consideration of the two leading points of Dr. M's article, yet we must be pardoned for remarking on his "new treatment" (?). It seems that even when he is called very "early" he begins with dry *calomel* until it has produced its peculiar effect, then mustard, then *lime water*. What *better treatment* to begin with than this? At the *eleventh* hour he advises quinine; but, as if distrustful of his *specific*, he reminds you that if the actions become "watery," be sure to *return* to the *calomel again*, and even a *third time*. The careful use of laudanum by enema he recommends to relieve certain symptoms; but, still anxious, he advises the use of "*acetate of lead*, *nitrate of silver*, *oil of turpentine*, *infusion of logwood* or *red oak bark*." To all this, he adds the most approved feeding. To this treatment, we would suggest to the Doctor the removal of the patient, if possible, to the country (even though it be in a malarial district), and the cure is apt to be perfected.

To recapitulate, we present the following conclusions:

1. The theory ascribing the cause of cholera infantum to malaria was considered by Rush and Condie many years ago.

2. That the disease exists in foreign countries, is proven by the "*distinguished London physician, Dr. West*," Trousseau, Wiesse, Rilliet, Billard, and many others.

3. Dentition is a natural process, during which great liability to disease exists.

4. Cholera infantum does not come under the laws of periodicity.

5. It is a disease peculiar to "large cities and towns," "and is *uncommon* in *localities* in which *intermittents* and *remittents* are *annually* and extensively endemic," as shown by authorities quoted, as also by Dr. M's own argument.

6. It has no special similarity to malarial fevers more than to exanthemeta or Asiatic cholera.

7. It does not *begin* at the same season that intermittents do, though they may exist together as a coincidence.

8. It is not treated by the same remedies and means that are universally used in intermittent fever, as shown by Dr. M's account of treatment.

9. It appears, after all, that Dr. M. has no "new treatment" for cholera infantum.

In discussing this subject, we have been careful in selecting from the great bulk of testimony only such authors, American and foreign, whose works are most familiar and are most popular, both as reference for the practitioner, and as text-books for the student at our colleges. If we have been too voluminous in our quotations, our excuse must be that by proper weapons we might be successful in scotching, at least, if not in killing, this *monstrous hydra, malaria.*

ART. V.—*The Relative Position Existing between the General Practitioner and the Specialist.* By JOSEPH SANDEK, M. D., Nashville, Tenn., (Read before Nashville Medical Society, July 1st, 1875, and referred for publication).

Gentlemen,—Permit me to give the resolutions as passed by the American Medical Association, in June, 1874:

Resolved, That this Association recognizes Specialties as proper and legitimate fields of practice.

Resolved, That Specialties shall be governed by the same rules of professional etiquette as have been laid down for the general practitioner.

The above resolutions recognize the right of a physician, educated in the various branches of his profession, who has

been honorably sailing under the protection of the medical flag, and has adhered strictly to professional courtesy and etiquette, to become a specialist. This means that he is now at liberty to pursue, investigate, and base his practice on one or more special organs, or to treat diseases by some special therapeutical agent, imposing on himself the duty to practise the specialty so selected exclusively. Now that the shackles have at last been removed, and physicians can enter untrammelled the pursuit and culture of a special field; since the doctor on this continent can direct his intuitive intellect and inventive faculties in the pursuit of a branch guided by his inclination, taste, or other circumstances; since he is allowed to enter a field the cultivation of which is congenial to his searching mind and adapted to his special inventive powers, we have cause to congratulate ourselves that the dawning of a new era for the advancement and progress of medical science is at hand.

This revolution in the American medical field means progress. Division of labor that has accomplished so much in all other sciences and arts, must give no less favorable results in the medical field. Physicians endowed with investigative minds will select some part of the wonderful machinery of man, devote their time, apply their intellect to the study and research of its structure, its chemical compounds, its physiological uses, its pathological alterations, and fathom to the very vitality of the physical and mental essence of nature's best and most complicated product—man.

We should not look down with disdain on the specialist, and endeavor to check his progress. Though some temporary confusion may follow the certain divergence from the old beaten track, yet the obliteration of this track may lead us into newly-trodden trails, coming unerringly from the whole circumference of the professional circle, concentrating in the great centre of the empire of medical science.

Nor should there be placed any stumbling block to check the advancement of specialists: cheer and encourage them the rather in their field of operation. Be not arrogant toward him whose only transgression is self-abnegation and devotion to the altar of science; whose aim is the thorough study and investigation of a special organ or subject; who, by constant application and the

culture of one field, may bring to light extensive and accurate general principles. By general principles, I mean nothing more nor less than general facts—facts based on a minute research of the physiological and pathological structure of the parts derived from ocular demonstration with the aid of the microscope. Principles, or rather facts, deducted by this minute and accurate process will place the science of medicine on a basis on which *even doctors could not disagree.* The specialist who, as a skirmisher in the field of science, advances boldly with the determination of bringing his mind, force and intellectual powers to combat with one single subject, whose aim is the addition of even one single fact to the vast domain of the medical empire, should be embraced as one of the Romans in the field.

The intellectual epidemic is spreading its scientific infection which, in its expansion, evolves the obscure point of learning—*how to learn.* Beginning by the cultivation of separate fields, it brings to light the simplicity of its means, the infinite variety of its results, and, by gradual, separate, and unerring progress, may ultimately embrace the totality of the scientific empire.

Reason, experience and universal observation approve division of labor as the great basis of progress in all the sciences and arts. And this reformation in the medical field was actually demanded in this continent, the home of the genius of invention, from the wooden nutmeg to the great Atlantic cable. If success has crowned every other science and art, when man was encouraged, assisted, and spurred on in the pursuit of a single branch that he intuitively preferred, that his mind's eye seemed to take in at a glance, and the labor thereof seemed to be adapted to his mental faculties—may we not reasonably expect similar beneficial results by cordially assisting the specialist in the science of medicine? This growing disposition of our intelligent physicians to adopt the culture of a *unit* in the medical field, will ultimately bring that compound body, man, physically, mentally, whether normal or abnormal, in the grasp of medical science, and the labor and researches so expended will bring our minds out of the old ruts of studying, theorizing, practising and thinking, and guide us forward unfalteringly to the very centre, to realize our progressive aim. We will advance first singly, but unerringly; then in groups, but unanimously; and finally as a whole, but fraternally; and by this slow but sure progress

the domain of the medical empire will be ruled by a sceptre carved out of the aggregate intellect of medical men. The surgeon who, in former days, had been thwarted in his progressive and scientific movements, who, under the old orthodox physician, was only treated as a professional servant, performing surgical and other menial operations by order, and under directions of the exalted physician, who alone had the privilege of prescribing, judging and directing when surgical operations should be performed, has at last, by his special devotion to science, by his thorough cultivation of the art, convinced society that surgery deserves a higher and more eminent rank. The public soon demanded of the profession surgeons endowed with the education of a physician. They reasoned, properly, if a knowledge of surgery is necessary to the student who intends to practise physic, a knowledge of physic is no less necessary to him who devotes his attention exclusively to the practice of surgery. The demand was rational, and the supply surely followed, and now we have no scientific division in the practice of physic and surgery.

Do not think that a specialist, impelled by the love of his profession, or by motives of scientific advancement, should bow with Oriental submissiveness to the general practitioner, who may proscribe or ostracise him; or that he who devotes himself to a thorough investigation of a special branch in his profession, and imposes on himself the duty to practise it exclusively, should be bound to look at the general practitioner as the great embodiment, the great monopolizing centre, or the totality of medical science, or that he is bound to obey your mandates and be your menial. No; intellectual slavery has existed, but the clasp of chains that entwined the intellect has long since rusted, and now intellectual eminence is the only prerogative.

Nature, in her progress, is regulated by harmonious motion. Let us, as observers and students of nature, obey her law of progress, and act in harmony.

> Who loves nature will obey her laws;
> Who most obeys them is her truest physician.

Three Testicles.—Dr. Peter Stewart, of Detroit, commenced operating on a case, supposing it was hernia. On cutting down, however, he found the tumor to be a third testicle.—*Penin. Jour. Med.*, July, 1875.

Clinical Reports.

A Case of Myosis, Caused by Paralysis of the Left Side of the Cervical Portion of the Sympathetic, in Consequence of a Gun-shot Wound. By GEORGE REULING, M. D., Surgeon-in-Charge of the Maryland Eye and Ear Institute, Baltimore, Md.

In the year 1866, an officer of the army, Capt. McC., was shot through the left side of his neck. The bullet entered about two inches above the clavicle, immediately behind the belly of the sterno-cleido-mastoid, and passed out about half an inch higher up at the anterior edge of the platysma myoides. During the two following years, the gentleman sank rapidly in consequence of small, purulent formations along the course of the sheath of the sterno-mastoid, as well as because of a pharyngeal soreness, which, greatly increased by every attempt at deglutition, amounted at times to a spasmodic seizure. The patient had been pronounced a hopeless consumptive by his medical attendants, when one day a little piece of cloth belonging to the coat collar, which had formerly been penetrated by the bullet, appeared through the open wound, which very soon after became scarred over, and the patient grew visibly stronger. Being put on a liberal diet, and having had the benefit of a voyage by sea to Key West, he completely recovered; so much so, indeed, that he undertook the management of a farm.

In the year 1868, while cicatrization was going on, he for the first time noticed shooting pains in the arm of the affected side, radiating especially from the little finger. At first, these pains appeared only after great exertions, or in consequence of a "cold," but in the fall of 1869, the neuralgia became of daily recurrence and great severity. At the same time, the patient was aware of a new symptom—a myotic condition of the left eye (of sudden occurrence), and accompanied with lancinating pain. He then came to me for advice.

Status præsens.—The patient is a wiry, though muscular man, 36 years old. At the left side of his neck the characteristic scar is seen running in the before-mentioned direction. Immediately above and below the clavicle, and partly in contact with it, there are three separate, distinct scars of the formerly fistu-

lous openings. The neck is somewhat constrained in its movements; the head cannot be turned very readily to the right, and is a little directed towards the left side because of a slight shortening of the skin and its muscles. The affected arm differs in nothing from the healthy arm, either in development, structure or temperature. In following the course of the nerves of the arm, however, and pressing tightly with the thumb, a well marked point douleureux is met with over the rotula of the ulna nerve, as well as near the insertion of the pectoralis major into the humerus—symptoms which point to a neuralgia consequent upon pressure exerted by means of cicatricial formations on branches of the brachial plexus.

The left eye differed materially from the right—the pupil being contracted to the size of a pin's head. Not only was this the case, but the pupil was turned somewhat awry in its direction from below and inward, to above and outward; light had no influence whatever upon it—it remained motionless. Neither its size nor its form was affected by the direct light transmitted by the sun, nor when that light was intercepted by the hand being placed before the eyes. That the pupil was contracted to its maximum extent was shown by the fact that the calabar bean could cause it to contract no further. S=$\frac{20}{200}$, with—$\frac{1}{18}$ = $\frac{20}{20}$. At a distance of 3″, the finest writing could be read, although the patient declared that he could read only a few words at a time. When he held the eye steady and looked at large objects, he could discern only portions of them, the field of vision showing a considerable concentric limitation.

After a one-grain solution of atropia had been instilled, and the pupil of the affected eye had, after the lapse of half an hour, enlarged to the diameter of the normal pupil on the right side, a healthy state of the internal structures, with the exception of a slight hyperæmia of the choroid and retina, was discernible.

If now we sum up the various points of this interesting case, our diagnosis will be paralysis of the cervical portion of the sympathetic, caused by the gradual contraction of the cicatrix left after a gun-shot wound.

My treatment consisted in instilling a solution of atropia twice a day for several weeks, as well as in the application of the continued current to the sterno-mastoid and along the course of the ulna nerve.

Despite the little hope of success I entertained, since the cause of the suffering was permanently present, the neuralgic pain abated in frequency and violence after two days. The effect of the atropia, which during the first few days was dissipated after six or eight hours, became of the usual duration after the sixth day. As soon as this much was accomplished I prescribed the ungt. cinereum to be made into an inunction with the extract of hyoscyamus, and had it rubbed into the scar. Every fifth day I applied one of Heurteloup's artificial leeches to do away with the hyperæmic state of the choroid. After he had been three weeks under treatment I was enabled to discharge the patient, into whose eye, in order to note the state of the pupil, I had not for the last week instilled a drop of atropia.

The gentleman left me with a pupil of nearly the normal size, and visual power but very slightly impaired, S=$\frac{2}{3}\frac{0}{0}$, with $-\frac{1}{4}\frac{}{0}=\frac{2}{2}\frac{0}{0}$.

(1.) *Case of Puerperal Convulsions—Bleeding—Recovery—Remarks.* (2.) *Puerperal Fever—Ice and Morphine—Recovery.* By Benj. H. Riggs, M. D., Secretary of the Medical Association of the State of Alabama, etc.; Selma, Ala.

About noon, July 22d, 1875, I was called to see a girl about an eighth part white, aged about 16 years, on the Alabama river, about five miles from this place. Her father stated that she had pain in her bowels, followed by convulsions. I mentally diagnosticated a case of hysteria, though the girl's age contraindicated it, and I carried but little medicine. Upon arriving at the cabin, however, I found her in violent post partum convulsions. She was a primipara and unmarried.

I learned that she was cheerful the previous day, and had done a day's work in the cotton-field; had gone to church on a neighboring place the night before, where she was taken in labor; returned to a cabin about two hundred yards from her mother's, and there remained until delivered of a full-term, male child, which did well. Nothing unusual in the labor. After daylight she was carried by two women to her mother's cabin, and there put to bed. A dose of oil was given her now by the attending midwife. She seemed cheerful, though restless. She had "laced tight" during the last months, in order to conceal her pregnancy.

About 7 A. M., two hours after delivery, she had her first convulsion, and must have had them every half hour until my arrival, about 2 P. M. She was rational at first during the intervals between convulsions, but had lost consciousness before my arrival.

I found her lying on her back, with her tongue protruded, bitten, and much swollen; her skin was very hot—probably about 105°, though I neglected to use my thermometer; her pulse was full, strong, and 140 to the minute; breathing was labored and attended with strangling sounds. Her pupils were much contracted; forehead hot. She soon had one of those horrible convulsions that are seen only in the lying-in chamber. Every muscle of the face was warped and corded, and the face and body twisted and distorted; eyes rolled up; mouth first drawn wide open, and then clenched like a vice upon the protruded and swollen tongue. I diagnosed a case of eclampsia puerperalis with cerebral hyperdæmia. I was informed that she had had two actions from the oil before my arrival, and that her bowels had been too loose previously; that she was very plethoric, and had been working under the July sun pretty steadily.

I was perplexed what course to pursue. I was five miles from town, with the Alabama river to cross, and nothing with me that could possibly suit the case but my thumb lancet, calomel, and cold water. I held that opium was contra-indicated by the contracted pupils and the arterial excitement. To go for chloroform and chloral would lose valuable time. Full of the late discussion of "One of the Lost Arts" in medicine and obstetrics, and driven to do something that would produce an immediate impression, I applied cold water freely to her head, and opened a vein in the left arm and bled to the amount of about ℥xvj. Her respiration became perceptibly calmer, and she seemed much more composed; no change in the pupils. I closed the orifice. In about twenty minutes another convulsion came on. This time I opened the vein and let blood flow until some effect was produced on the pulse—the patient being horizontal. After, about ℥xxxij had flowed, the pulse became quicker and weaker, when I closed the orifice. The intensity of the symptoms was ameliorated. The blood made a firm consistent clot throughout.

I should guess that there was lost about ℥l of blood; most of it flowed into a half-gallon tin wash basin, which was nearly full; some flowed on the floor and bedding. The orifice in the vein was small. I now dropped calomel, about gr. xvj back on the tongue and left her, directing another similar dose of calomel in two hours to be given; the cold to the head to be kept up. Upon returning to town I sent out two ounces of chloroform, and the following prescription;

℞. Chloral hydrat.....℥ij.
Syrup simplicis,
Aq. menth. pip. āā.....f℥ij.

M. Sig.: Tablespoonful every two hours.

I also sent out ice with directions to apply it to the head, arms and hands freely; and for her to eat it and drink ice water as soon as she could.

July 23.—Found her father at my door after an early breakfast waiting for me. Reported that his daughter had had only three convulsions after my visit; had given the chloral and had used the chloroform as I directed; only one convulsion after the use of the chloroform and exhibition of one dose of chloral, gr. xv.

On visiting her about 10 A. M, I found her much improved; pulse about 130; skin warm but perspirable; apparently rational, but not disposed to talk; tongue swollen, protruding, and covered with a creamy muco-purulent secretion; bowels had acted twice; had partaken of chicken water; relished ice water given from a spoon; some malaise and tossing; had used about a drachm of chloral and one ounce of chloroform, since yesterday evening. I directed the following mixture:

℞. Spts. nitr. dulc..... ..... gtt. xl.
Morph. sulph.....gr. ss.
Tinct. aconit..... .....gtt. viij.
Mistur. potass. citrat.....f℥iv.

M. Sig.: Tablespoonful every two hours diluted with pounded ice.

Patient to be kept quiet; allowed to sleep; liquid nourishment: cold to the head if she wished it; tongue to be frequently wet with a cold infusion of the inner bark of white sumac. Chloral and chloroform to be repeated if necessary to procure rest—not otherwise. Child to be put to breast as soon as she was well enough to allow it.

July 24.—Father came in before breakfast and reported

her as not doing so well; fever rose about 3 A. M.; had taken some chicken soup; got on so well during the day yesterday as to encourage hope of convalescence. Directed to continue the ice and fever mixture; and to report again this evening.

At 5.30 P. M., I found patient with a very high fever; pulse 160; temperature in axilla 104°; apparently rational, but somnolent and listless; some jactitation; fever had increased after 10 A. M.; in early morning attempted to talk some and took some chicken soup; tongue still much swollen and very sore, though not so red as yesterday; had been using on tongue, peach leaves tea and alum, a domestic remedy. Gave about the $\frac{1}{6}$ gr. morphine hypodermically, and left some portions of same to be taken as needed; left quinine gr. xx and Dovers' powder, gr. v divided into two equal doses; directed first to be given between 12 and 3 o'clock at night if fever was low enough, and the second next morning at 8 o'clock; room to be kept ventilated; only two attendants allowed in it at once; ice to be used freely.

July 25.—Patient reported better. Took the quinine last night, and several of the morphine portions; ate some rice-water, coffee, etc. Enjoined perfect rest, a continuance of the ice, morphine when necessary to calm restlessness, and a dose of oil to-night if bowels do not act. Tongue better.

July 26.—Patient still improving. Father came in when I was absent in country, and did not see him; took out ice.

July 28.—Reported better and nursing infant. I am informed that she has no memory of any occurrence from Wednesday night to Monday night; does not recollect going to church the night before the babe was born; does not remember seeing me at all.

Remarks.—I think the blood-letting in this case decided the question in favor of recovery. It was supplemented and aided by the chloroform, chloral, ice and purgation. The morphine forty-eight hours after commencement of convulsions was of benefit, and indicated by the exhaustion; she then bore well quinine and Dover's powder. I have always been a believer in the "stationary constitution of disease," or as it is termed a "change of type" in disease. I am of the impression that we are again, in this section at least, approaching a sthenic type; for the last twelve or fourteen years, during the latter years of the late war and since, up to within the last two years, there prevailed here

an asthenic type of disease; that type now seems to be passing or passed, and the judicious use of blood-letting, calomel, ice and cooling regimen will give success in many cases where the "restorative, or stimulating treatment" will insure a fatal issue. Gross, Mettauer and others are doing good service in their late writings on this subject.

This case illustrates the straights Southern physicians are in, in treating freedmen on plantations; estopped by the "Code" from contracting for practice; and estopped on the other hand by the freedman's poverty and our own prudence, we cannot furnish them medicines and medical services at fee-bill rates, where there is much sickness or cases are protracted. In this case I adopted the course of visiting the patient when it seemed imperative and in the interval of making her father visit me and report her symptoms and receive directions. It is as much a physician's duty to take care of his own health and pecuniary interest, as that of his patient.

On the 14th October, 1874, I delivered a lady in this city of her second child, girl, at full term. The labor was not attended with any unusual incidents; but on the eighth day there arose a violent puerperal fever of an irritative character; the skin was very hot, particularly in the palms of the hands, and on the feet; there was some tenderness in left iliac region and slight tympanites. I attribute the recovery of this case mainly to the free use of ice, and the judicious use of morphine hypodermically. Of course we had the adjuvants of perfect quiet, mild but nutritious diet, daily alvine evacuations, etc. I sat by the bedside of this patient one night when the fever was highest and the skin pungent and dry, and I applied a block of ice, as large as I could grasp in my hand, continuously to the head until it was perceptibly cooler; then to the wrists and palms; then to the feet, ankles and thighs; then to the spinal column from cervix to lumbar region; this was kept up, and repeated until a perceptible reduction of temperature took place, and the patient went into a gentle sleep. There was not much further trouble after this. The breasts stopped secreting in this case; but after having weaned the infant for nearly two months, nursing was resumed and the milk supply became satisfactory. The mother became unusually robust after her recovery. She and the child are now doing well.

Catarrhal Fever, with Pneumonic Complications. By F. K. Bailey, M. D., Knoxville, Tenn.

Nov. 23d, 1874.—Eddy H., aged 4, of sanguine bilious temperament, German parents.

The father called and reported his little boy as being feverish, with some cough, and complaining of pain in the left side just above the nipple. Thinking that worms contributed to cause the symptoms, I sent three powders, containing each santonine grs. ss., calomel grs. ij, to be given at intervals of three hours, the last to be followed with castor oil.

24th.—Called at the family residence and found the child still hot, but the skin moist; the pain in the side not relieved; tongue white; a hard and rather dry cough; some rhonchus at the affected point in the left lung; pulse rapid and quick; respiration much accelerated. The bowels have moved freely, and one large round worm passed after taking the castor oil. Prescribed: ℞. Potassii iod. ʒss, Syr. ipecac. Syr. scillæ, āā ʒss, Syr. tolut. Syr. simplicis, āā ʒj. M. S. Teaspoonful every 2 or 3 hours.

Topically to the side, apply ℞ Cerat. canth., Emplast belladonna āā ʒj. M. Make plaster 2x3 inches. Pulv. Doveri grs. iij. p. r. n., during the night, to produce quiet.

25th.—Called out and found the little patient still with pain in the left side. Less fever, but pulse beats 128; respiration slower. Rubbing sound on auscultation, with mucous rale more distinct than on yesterday. The plaster blistered the surface. Bowels open; will drink nothing but warm tea or coffee; cold water causes distress, probably from its contact in passing down the œsophagus; cannot lie down with any ease, and consequently insists upon being up in a chair. Continue the mixture, and take Dover's powder and leptandrin at bedtime; also to apply the plaster to the upper part of the chest, under the clavicle. As he cannot bear cool air, I directed especial care in keeping him warm. The temperature outside is about 40°, but down to 32° early in the morning.

26th.—Much the same as on yesterday; pulse over 100; tongue coated at the base. Last night he was chilly and required to be covered in bed to keep warm. Has a sallow look, and complains of pain through the left shoulder, with none in the affected side; still some rhonchus, but the air passes in more freely to

the lung; bowels open once during the past twenty-four hours. To continue the mixture, and take the following powders, one every four hours: ℞ Quin. sulph. gr. x, Pulv. Doveri ℈j, Sacch. albi grs. xv. M. Make eight powders.

27*th.*—Improved; pulse 108; slept all last night, and is more cheerful to-day; can lie down with less complaint; but little rhonchus, and much less expectoration; no pain in the shoulder or in the affected side; impulse of heart's action somewhat increased, but less than upon previous visits. There is something of a diastolic murmur to day, which resembles a flapping. Continue the mixture and quinine powders. To have soup for diet. His bowels having moved to-day, suspend leptandrin. Decidedly convalescent.

29*th.*—Still improving, although there is not free respiratory action in the left side; bowels open and appetite returning; is about the house, and feels like playing with the other children; a slight inclination to depress the left shoulder, as if to favor that side. Continue quinine with the mixture.

30*th.*—As the child was reported as not so well to-day, I called out, and found some fever; pulse 110 and rather full; inclined to be feverish about 5 P. M., yesterday; dulness over the point where pain was first felt in the left side, and, from the inclination to depress the shoulder, and carry the head to the left also, I believe there is an adhesion forming. His mother says he complained last night of pain in the lower part of the right side of the chest, but to-day none is felt. His tongue is rather pale, with papillæ distinct, but not elevated; no coat, but the surface of the tongue looks flabby as well as pale; no action from the bowels since yesterday at 1 P. M.; some appetite, but not inclined to amuse himself. Continue quinine powders, and take the following mixture: ℞ Potássii iodid. ℥j, Syr. scillæ, Syr. rhei aromat. $\overline{aa}$ ℥ss, Tinct. acteæ race. ℥iij, Tinct. sanguin. canadens. ℥ij, Tinct. digitalis ℥j, Tinct. cinchonæ ℥x. M. Sig. Teaspoonful every four hours. Re-apply the plaster to the left side as at first.

Dec. 14*th.*—The father called in and reported Eddy as having recovered, except that he is thin in flesh, having fallen away a great deal during his sickness. No complaint of pain, and carries the left shoulder on a level with the right.

June 11th, 1875. This little boy came to my office complaining of a cough, with pain in the chest. He is becoming stout, and has grown somewhat in six months. I found a slight rale at the same point where there was pain last winter. Has had chills for a week past, and his skin to-day is moist and rather clammy. ℞ Quiniæ sulph. ℈j, Ammonii bromidi ʒj, Syr. senegæ, Syr. rhei aromat. āā ʒj, Tinct. actæ cimicifugæ ʒss, Sanguin. canadens. ʒij, Ess. gaultheriæ ʒij. M. Sig. Teaspoonful once in every eight hours, in water.

The above notes were kept of a case which occurred at the commencement of a general prevalence of what was diagnosed as catarrhal fever and capillary bronchitis. The affection continued to prevail during the winter and well into the spring months. The proportion of fatal cases was small, although many proved to be pneumonia.

Since last October more than the usual number of cases of thoracic-disease have prevailed, not only in our city, but in the adjacent rural districts. This has been true since the epizootic visitation of 1873. Since that time there has been less of a sthenic character noticed in affections of the chest, and remedies directed to allay excessive nervous lesion, or vascular excitement, were most wisely selected from those having sedative or stimulating effects.

A Case of Vicarious Menstruation. By Jno. N. Upshur, M. D., Richmond, Va.

On the 17th of April I was called to visit D. B., colored female, aged 18 years, and received the following history of her case:

Menstruation came on at 13 years old, and was regularly performed for two years, though the periods were painful; had suffered from amenorrhœa for the last three years, but for the previous ten months had, at intervals of four weeks, a vicarious discharge of blood from the stomach, attended by the following symptoms, viz: Cough, nausea, vomiting of blood (dark in color and clotted), pain in the small of the back, extending down the thighs, with a feeling of weight in the hypogastric region, and puffing of the abdomen. This last symptom disappeared so soon as the vomiting began. She was very anæmic, had little or no

appetite, and suffered much from headache; eyes looked dull and heavy, and tongue furred; bowels very much constipated.

Ordered a cathartic, and the next day I placed her on tonic treatment, consisting of iron, quinine, strychnia, and aloes.

On 21st, being about a week prior to the expected return of the vomiting, I directed tinct. guaiacum 3j, to be taken every night at bedtime, with hot hip-bath.

May 1*st.*—Much improved.

7*th.*—Had usual headache and cough, but spit no blood; more pain in pelvis than for sometime; expect period on 4th or 5th of June. Ordered iron, strychnia, ergot, ext. gentian.

10*th.*—Headache and some bleeding from the nose. Ordered ammonio citrate of iron.

June 15*th.*—Menstruation came on to-day, preceded by two chills, followed by fever, and attended by headache and pain in the back; flow free and copious; no cough or vomiting.

July 7*th.*—Menstruation again returned copiously, lasting seven days.

Remarks.—The above case would seem to be incomplete at first sight, because of the long duration of the last period, which would apparently indicate continued uterine trouble. But the interesting feature being the regular discharge from the stomach at a fixed period for nearly a year—that viscus performing the function of the womb—the history of the case being given until the function was performed *per vias naturales*, I do not deem it of sufficient interest to follow it farther. A vaginal examination was made during the treatment of the case, the womb found slightly retroverted; replaced and kept in position by a properly adjusted pessary. The patient's general health has very much improved, and she says that she feels much better than she has done for two or three years.

In the outset, her lungs were carefully examined and found entirely free from disease.

A Case Requiring Evisceration and Amputation of the Extremities of a Fœtus for its Delivery. By JOHN M. PAYNE, M. D., Richmond, Va.

I was called July 1859 at 8 A. M., to see a colored woman, æt. 40, in labor, at the 8th month of pregnancy; she was well

formed and in good health; mother of seven or eight children; pelvis well formed and capacious. A dead fœtus was soon delivered, when on examination for the placenta, I discovered the arm of another child presenting. Apprehending no trouble, (from her previous easy labors), I put back the arm preparatory to turning, but found it impossible to prevent its return—so powerful were the contractions of the uterus. I was unable to move the child from its position, nor could I reach the feet. I made every effort to overcome the contractions, by all the usual remedies (except chloroform), but all proved futile. Finding that I had a troublesome case, I sent off for assistance. Dr. C., a physician of long experience, arrived at 6 P. M.—about 9 hours after the delivery of the first child. His first enquiry was: "What is the difficulty?" I replied that the arm of the child was presenting, and I could not deliver it. "Why do you not turn and deliver?' "That is what I have been endeavoring to do for several hours." "Nothing is easier," said he, and taking off his coat, went to work with a confident and satisfied air. After working with a will for several hours, he gave it up as an impossibility. About 10 P. M., we gave her an opiate, hoping to induce sleep, and that in the mean time these violent contractions would cease, and then we might turn and deliver the child. We left her in the hands of a good nurse, with instructions to call us, in certain contingencies. At midnight, we were called up by the nurse who said that our patient would die unless something was done for her. Knowing the child to be dead, I said to Dr. C., "we must deliver her, if we have to take the child away piece by piece." He agreed with me, but did not like the responsibility of undertaking such a case with the means at our command. I replied that I assumed all responsibility in the matter.

A simple pocket case composed our *armentarium chirurgicum*, and finding no suitable instrument in that, I procured a good pocket knife, and with that and that alone, the child was taken away. The contractions being still very strong, the left arm protruding, the shoulder was pressed well down.

Inserting the fore and middle fingers of the left hand (sometimes one and then both of them), between the child and the mother to protect her from the knife, the arm was taken off at the shoulder joint. In a short time the child was turned

sufficiently for me to reach the other arm, which was taken off in the same way. Then an incision was made about the lower end of the sternum, and the viscera extracted.

I then hoped that we should be able to bring down the feet and deliver, but in this we were again disappointed; we had nothing else to do, but proceed with our cutting. I next divided the trunk at the last cut, and then disarticulated one of the femurs, which was drawn out; in a short time, the other leg with the lower half of the trunk was delivered, leaving the head and the upper half still in the uterus. The womb then seemed to redouble its energies and held the remaining portions of the child with a firmer grasp than ever.

The *nucha* now presented and the next step was the disarticulation of the head; then the upper portion of the trunk came away, followed some time after by the head.

One who has never been placed in similar circumstances, can scarcely imagine the difficulties attending such a case—the small space to be occupied by the fingers and knife, then the difficulty of cutting when holding the knife only with the fingers (on account of the shortness of the knife), and all of it done by the touch, it being impossible to see where I was cutting.

Physicians in the country labor under many disadvantages, unknown to those in the city, for the want of instruments and appliances always at hand.

The question will very properly be asked, why did you not use *chloroform* to overcome the violent contractions of the uterus? This is my answer, I have been practising but a short time, and having imbibed my ideas of obstetrical practice from that *nestor* in midwifery, Dr. Charles D. Meigs, of Pennsylvania, I dared not use a remedy he had warned us so strongly against, and especially in cases of this nature. The following from his letter to Prof. Simpson made a strong impression on me, "I fear in all cases of chloroformal anæsthesia, there remains but one irrevocable step to the grave." With these ideas of chloroform I could not use it, and especially in a case when the feeling of the woman was a great protection to her in making known to me any touch of the knife.

I now feel assured, however, that this great teacher was in error in *prescribing* this great *lethean* to the extent that he did,

and am confident, had I used it with proper caution, much suffering would have been saved the patient, and a tedious and disagreeable operation the physician.

The woman made a good recovery in about six weeks. Having the patient near me I was enabled to see her often, and give her all the attention necessary. The constant attendance of a first-rate nurse contributed very much to the final success of the case.

A most remarkable circumstance connected with this case was that 13 months after this delivery, exactly the same thing occurred; but having suffered for several months with malarial fever and its sequelæ, she was so much enfeebled that she was unable to stand the shock; and finding before I commenced the operation that her pulse was failing, I made every effort to strengthen it, but was unable to do so, and she died undelivered.

Correspondence.

Cholera Infantum.

Mr. Editor,—The August No., 1875, of the *Monthly*, among its other valuable contributions, contains one from Prof. O. F. Manson, of Richmond, on *Cholera Infantum*, the therapeutics of which tallies so completely, *in the main*, with my own experience in that disease in a practice of many years, that I must commend it. But I wish your permission to volunteer a remark, not, however, with the expectation or with the intention of adding anything to this branch of the subject, but to differ slightly with regard to the cause of the disease.

That this is not a blood disease, in the usual acceptation of the term, is proven by the prompt response on the part of the system to the actions of mercury and quinine—24 hours use of these remedies, together with topical applications, and other minor attentions, being ordinarily sufficient to restore bile pigment to the alvine discharges, to allay the fever, and to equalize the circulation. The tenuity of the nervous and vascular systems is such that a perturbation is not infrequently gotten up in a way entirely beyond our comprehension; but oftener than otherwise we trace the cause to some imprudence in diet. I believe the disease to be a general *erythema*, in the Hippocratic

sense of the word, and that this erythema (redness) is a secondary condition occurring in infants as a consequence of the peculiar *erethism* of the whole nervous and vascular systems of the infant. For the symptoms we observe in cholera infantum are the natural consequences of irritation of the nervo-vascular system, which symptoms, if not checked, are speedily followed by signs of inflammation—acute and chronic. I believe the fact of the sudden amelioration of the disease under the remedies recommended by Dr. Manson in itself proves the correctness of the opinion I hold.

I cannot think that the disease is malarial for many other reasons. That it prevails in *paved cities* more frequently, and with far greater malignity and fatality than in malarial sections of country, there can be no doubt in the minds of those equally familiar with practice in cities and in malarial rural districts.

That the disease does not prevail in English cities to anything like the extent that we know it does in the large cities of our own country, as observed by Dr. Manson, I think might be fairly inferred from the following sentence taken from Kohl's *Russia and Russians*, p. 135, edit. 1843, which gives the Russian opinion of English nurse maids: "In Petersburg, the nurse maids for young children are invariably English, who are *universally reputed to excel all other nations in that capacity.*"

But whether the disease be malarial in its origin or not, the treatment penned by Dr. Manson has, in my experience, been the most successful of all that I have tried. But there are reasons why this treatment should give such results apart from any (supposed) influences which malaria may exert, either upon the causation or course of the disease.

WM. S. STOAKLEY, M. D.

Northampton County, Va., August 4, 1875.

Original Translations.

Foreign Scraps. By GEO. HALSTED BOYLAND, M. A., M. D., Baltimore, Md.

1. An Extra Ovary.—In the Société de Biologie, Synety (*Le Mouvement Medical*, 20th June, 1875,) mentions the following interesting case: A new-born child that died a few hours after

birth had—the body offering no anomaly—on the border of one of the ovaries six or seven small cysts—pedunculated. One of these was remarkable on account of its form and consistency; and upon being examined more closely, it proved to be a normal ovary, with its epithelium, its tubes and follicles, having in the centre a *kern*, with its macula germinatora.

This case appears to be the only one of its class, and is believed to be especially noteworthy from the probability that, with the existence of this ovary in the living body, we should have had an interesting case of extra-uterine pregnancy. In literature only two cases something similar are reported; these are given by Americans, and will be found in the *Annales de Physiologie.*

2. A Third Dentition at 90 Years.—This seldom and extraordinary case was observed in a nun in one of the Paris hospitals. She received all her teeth again at 90 years of age, after having previously received a new supply *in toto* when she was 47, and again when she was 63 years of age. The chief of the Hospital, who had been director of the same (for incurable diseases) for fifty years, had occasion to observe this dentition in person, and mentions the same in his report to the Academy of Sciences. Hunter, Jobert de Lamballe, and Petrequin mention similar cases, which, however, did not transpire at so advanced an age. (*Il Raccoglitore Med.*, No. 6; *Allg. Med. Central. Zeitung vom* 23*d* June, 1875.)

3. Cut Wound of the Abdomen, with Protrusion of Omentum, Intestines and Liver. (*Centralblatt für Chirurgie.Med.—Chir. Centralblatt.*) A woman 32 years of age, and given to drink, inflicted on herself, with two razors, two wounds in the abdomen. The larger one in the linea alba opened the abdominal cavity to a considerable extent; the other only cut through the skin. The patient was much exhausted by the bleeding; but when the author arrived he found those in attendance eagerly engaged in holding the widely-gaping wound edges together. At each movement of the patient, there protruded the left border of the liver, a portion of the colon, and omentum. The author replaced these, united the wound by suture and adhesive plaster, over which he placed a compressor bandage. On the following day, in changing the dressings, he found a protrusion of the

ascending colon about the size of a hazelnut, in which there was a penetrating cut-wound one-half of an inch long; through this the contents of the intestine escaped. This wound was closed with suture, and the bowel replaced within the abdominal cavity. Three new ligatures were placed at the point of protrusion. Healing took place without interruption, and was ended in four weeks.

4. Dry Earth for Ulcers of the Foot.—(*Alege. Med. Zeitung*, June 29, 1875.) For the healing of gangrenous ulcers of the foot, the following procedure is recommended: Take dry earth (like gypsum) and use in such a manner that a layer comes to lie upon the ulcer itself. This should be secured by means of a cloth moistened with pure water. The dressing remains twelve hours. In the Indian hospitals very good results have been obtained by this application.

5. Malformation.—[*A Rare Accident of Labor.*] Dr. Hoffman (Burgsteinfurt) gives in the *Correspondenzbl. d. arztl. Vereine in Rheinland*, No. 14, 1874, the following case: A woman, whose pelvic measurements were not particularly small, but whose conjugata were shortened by one-third of an inch, bore, without aid of art, a child with only one eye. The other eye hung by a thread of cellular tissue, swaying to and fro upon the breast. The child lived, but was crippled both in body and mind. After two years the same woman bore (the forceps being used) another child, who also had but one eye. This one died. The bones of the head were broken down upon the base of the skull. By means of pressure on the sunken right frontal protuberance, the upper orbital border could easily be brought into close contact with the lower. That is the procedure by which the other eye had been pressed out. Such pressure, with crushing of the bones brought about by the labor alone, is certainly very seldom.

6. Blood-Vomiting of Children at the Breast.—Dr. Cour. Küster published in the *Deutschen Zeitschr. für prakt. Med.* No. 20, 1875, two cases observed by himself in which children at the breast, without the least warning or prodromal trouble, vomited blood for several days until the source of the bleeding was discovered. As this blood (judging from its appearance)

came from the stomach, the nurse was at once examined; and in the first case—but only at the expiration of three days—a spot, hard and painful to the touch, with redness of the skin, was found on one breast. In the second case, no physical signs could be detected about the nurse's breast. In both cases the vomiting of blood ceased as soon as the nurses were changed. The children had accordingly sucked at the morbid and insufficiently secreting breast, receiving and swallowing blood.

7. Carbolic Acid a Cure for Hæmorrhoids.—Dr. A. Cianuosi (*Raccoglitore Medico*, 20th March, 1875.) was consulted by Dr. P., an old colleague, who was afraid of the knife, and who had suffered for many years from a large internal hæmorrhoid. As the patient was unwilling to submit to a bloody or any painful operation, Dr. C. conceived the idea of painting the hæmorrhoid for a long time with carbolic acid; and he succeeded in this manner, in the course of three months, in causing it totally to disappear. At the expiration of one and a half years, when the last examination was made, there had been no return of the disease.

9. A New Method of Introducing Medicaments into the Uterus—Gelatine Capsules.—Dr. Sale, of Vienna, mentions that as his porte-caustic was for some time missing, he supplied the want by filling small gelatine capsules with the necessary medicaments. These he then introduced into the uterus by means of a pincette.

He, as well as some of his colleagues, have treated successfully several patients in this manner, which is, to say the least, not exactly new, but an advance beyond medicated intra-uterine pessaries.

8. Poisoning by a Hat—Anilin.—An extraordinary case of poisoning happened a short time ago in Steltia. During the Pentacost a shoemaker bought a felt hat. The wearer—although the hat no where pressed the head—experienced severe headache, and upon his forehead a raised eruption broke out, the papillæ of which soon went into suppuration. Also the eyes became inflamed in a similar manner; in fact, they were almost closed by the swelling, which now extended more or less internally to all parts of the face. It was but too evident that this

process had been brought about solely by wearing the hat. This, therefore, was given to a legal chemist for examination. He proved that the brown leather encircling the hat within had been dyed with poisonous anilin color, as is unfortunately still too often practised.

(From *Medicinisch-Chirurgische Rundschau*, June, 1875.) By Rev. Dr. A. S. B., Richmond, Va.

Reduction of Old into New System of Weights for Druggists and Physicians—

OLD WEIGHT.	NEW WEIGHT.	PER CENT.	
		Larger than old.	Smaller than old.
$\frac{1}{8}$—$\frac{1}{6}$ Grain	1 Centigramme	10.	20.
$\frac{1}{4}$—$\frac{1}{3}$ "	2 "	10.	20.
$\frac{1}{2}$ "	4 "	10.	—
$\frac{2}{3}$—$\frac{3}{4}$ "	5 "	4.	10.
1 "	7* "	—	3.
$1\frac{1}{3}$* "	1 Decigramme	—	4.
2 "	$1\frac{1}{2}$* " = 15 Cgr.	3.	—
3 "	2 "	—	9.
4 "	3 "	3.	—
6 "	4 "	—	9.
7* "	5 "	—	2.
8 "	6 "	3.	—
10 "	7* "	—	4.
12—13"	9* "	3.	5.
14 "	1 Gramme	—	2.
20 " =1 Scruple	$1\frac{1}{2}$* " = 1 Gramm & 15 Cgr.	3.	—
30 " = $\frac{1}{2}$ drachm	2 "	—	9.
40 " = 2 scruples	3 "	3.	—
60 " = 1 drachm	4 "	—	9.
70* "	5 "	—	2.
120 " = 2 drachms	9* "	3.	—
140 "	10 "	—	2.
240 " = $\frac{1}{2}$ ounce	18* "	3.	—
270 " = $4\frac{1}{2}$ drachms	20 "	2.	—
480 " = 1 ounce	35* "	0.	0.
$1\frac{1}{2}$* ounces	50 "	—	5.
2 "	70 "	0.	0.
3 "	100 "	—	5.
4 "	150 "	7.	—
6 " = $\frac{1}{2}$ Libra	200 "	—	5.
8 " = $\frac{2}{3}$ "	300 "	7.	—
12 " = 1 "	400 "	—	5.
14* " = $1\frac{1}{6}$ "	500 "	2.	—

The sign * indicates that these special doses are not in general use.

Liniment for Intertrigo.—Prof. Lang recommends (*L' Union Medicale*, No. 52, 1875) the following prescription: R. Bismuth,

subnit., Glycerin, $\overline{aa}$ grammes viij. Mix, and add to the mixture Tinct. cochneal gtt. xxv–xxx, if you wish to give it a skin color. Cover the part affected with a layer of the liniment every eight days. If the disease is of long duration, then apply vesicants and give purgatives, while you fight the intertrigo with subnitrate of bismuth.

Modifications of Urine in Cerebral Hemorrhage.—Dr. August Ollivier (*Gaz. Hebdom. de Med. et de Chirg.*, Nos. 11, 12, 13, 1875), has observed polyuria, albumen and sugar in urine where hemorrhage has reached neither the bottom of the fourth ventricle, nor the pedunculi cerebri. The disturbances in the urinary secretion appear either immediately after the apoplectic attacks or in the first hour, and disappear in most cases in 12 or 24 hours. Neither blood nor pus corpuscles are found in the urine. The kidneys did not exhibit any sign of Bright's disease. The appearance of such signs have not only a great diagnostic value, but they also involve an unfavorable prognosis.

Use of Warm Bath in Puerperal Diseases—Dr. Osterloh (*Deutsch. Ztschr.* No. 9, 1875,) has taken up, in the Lying-in Institute at Dresden, the old method of Schröder, which consists in using warm bath (23° to 26° Reaumer—about 84°–90°F) in puerperal diseases by adding a douche of from 8° to 10° [about 50°–55°F.] Reaumer. Immediately after the patient was taken out of the bath she was wrapped in a dry blanket and left wrapped for half an hour; then dried and dressed. The combination with the cold douche was used in the general nervous excitement, when the patients could not sleep night and day, in strong delirium, headache, which is often a companion of endometritis, and in puerperal mania. In 184 cases so treated, Dr. O. comes to the following conclusions: The use of lukewarm bath, and eventually with cold douches, (1) is absolutely harmless to the puerperal patient; (2) is a highly recommendable means for pacifying the system, for producing sleep, and to combat headache. (3) It is an excellent means to reduce, in most cases, the temperature of the puerperal patient; and (4) *that it is fit to be used alongside with other fever remedies in treating puerperal fever.*

Studies Concerning Changes which take place in the Lungs after Brain Injuries.—Dr. M. Heidtler (*Instit. Experiment. Pathol.*

in Vienna, Vol. I, 1875) bases his conclusions upon the results obtained lately by Nothnagel, Charcot and Ollivier, that pathological changes in certain parts of the brain, especially by brain apoplexy and brain tuberculosis, necessitate the effusion of blood into the lungs, from the sub-pleural and pulmonary ecchymosis till extravasation of the whole lobe of the lung results. The reasons of such an occurrence are, according to Schiff, the paralysis of the vaso-motors, and according to Brown-Séquard, in a sudden contraction of the blood vessels. Dr. Heidtler called attention, on the basis of his investigations, to the fact that only exceedingly wide spread extravasations are dependent on brain diseases, for the lungs of normal animals (rabbits) after they are killed by the knife or by chloral hydrate, always show a slight ecchymosis. The animals lived different durations of time after injuries by deep punctures of the body with metallic needles. Slight incisions of the cerebral hemispheres and vermis cerebelli left the animal perfectly intact. Deeper incisions caused death after 3 or 4 days. Injuries of the base of the brain and the optic thalamus caused death in 24 hours. In injuries of the peduncules cerebri, death occurred after many days. Examination of the lung showed as well hepatization of the lungs, as also pulmonary and sub-pleural effusion of blood. The effusion of the blood formed small, separate or cohesive collections. They were to be found in great numbers in the lower lobes, and gained intensity from above downwards, and from the periphery inwards. Usually both lungs were attacked, and not seldom showed in that part of the lung a greater amount of effusion, which corresponded with the injured side of the brain. Besides this, hemorrhages were observed in many other places, as in the liver, stomach and pelvis. Especially were the hemorrhages observed in cases of injuries at the base of the brain. In such cases, were inflammations of the lung to be found. Dr. H. comes, therefore, to the conclusions (1) that injuries of different parts of the brain may cause an immediate change in the lung; (2) that injuries of certain portions cause no change at all in the lungs; (3) that an injury of the medulla oblongata—and herein he differs from all established opinions—necessitates intense and striking changes in the whole structure of the lungs.

Death from Medium High Temperature.—Dr. Speck reports (*Centralbl.* No. 10, 1875,) the case of a girl, 17 years old, who

was wrapped in a fresh sheep skin, laid in bed surrounded by fresh baked hot bread, and then covered with a blanket to cure contractions of limbs of long duration. After an hour, she felt uneasiness, pain and slept; strong respirations, sweat, at last paleness, and after three hours, death. The investigation after death showed an advanced state of putrefaction. The vessels of the soft meninges (pia mater) of the brain, even to its most delicate ramifications, were affected, while the strongest were nearly bloodless and filled with air. The heart and large arteries were bloodless. A foamy liquid was found in the pericardium. The muscles of the heart were flabby; presented a dirty, red color, spotted with ecchymose-like blood points. There is no doubt that the cause of death in this case, by an absence of other reasons, was due to the high temperature. Bernard and Ackermann have proved the dangerous influence of external temperatures, equal to the temperature of our body or exceeding it.

Jaborandi.—In our exchange (*Mitth des Wiener. Medicin. Doct. College.*, May 24, 1875) we find Prof. Drasche gives his clinical and experimental observations regarding the value of *Serronia Jaborandi.* All his patients (many hundreds) took the remedy not unwillingly, and digested it very well. In all the patients, it caused increase of the saliva, and immense increase of perspiration; bad results, none. Serronine is soluble in water. Serronine, gr. ij, in water ℥j, caused secretion of saliva and moistened skin. Five grains caused, even with an uncovered head, profuse sweating of the body. As a diaphoretic, Prof. D. considers jaborandi as a unique remedy.

Influence of Iron Upon Nutrition.—Prof. Rabuteau (*Acad. des. Scie.*, May, 1875) took, in three periods of five days each, 12 centigrammes of chloride of iron. He found an increase of urinary deposits and of the acidity of the urine, without an increase of the usual amount of urine itself.

The Supreme Court in Munich has sentenced a druggist to two years imprisonment for assuming the title of Doctor, announcing himself a homœopath, and able to cure, without reward, all diseases.

Proceedings of Societies.

MOBILE MEDICAL SOCIETY.

(Reported by W. D. Bizzell, M. D.)

July 3, 1875.—**The Relation Between Diphtheria and Croup.** Dr. Heustis took the position that the two diseases under discussion are separate and distinct, and should, under no circumstances, be confounded. Of the two varieties of croup—the spasmodic or false, and the membranous or true croup—only the latter was liable to be regarded as synonymous with diphtheria. Death, he says, may occur in the course of membranous or true croup from one of three causes: (1) Spasm of the glottis, which is liable to supervene at any time in the course of the disease; (2) amount of exudation blocking up the larynx, the aperture of which in children is quite small; or (3) the inflammation and exudation extending into the smaller divisions of the bronchi and air cells produce a catarrhal or broncho-pneumonia. The false membranes of croup are never known to invade primarily or as a sequence any of the mucous surfaces of the body, save that of the respiratory tract—not even the neighboring pharynx, which is so often the point of primary attack in diphtheria; nor do they affect the external integument. The constitutional symptoms of membranous croup are, moreover, not the same as those pertaining to diphtheria. In the former we have only the more or less intense febrile reaction, together with such general symptoms as are induced by, and proportionate to, the amount of dyspnœa. Death is never, under any circumstances in this disease, due to the amount or profound character of blood poisoning. It is not a constitutional disease, but death, as already mentioned, is produced mechanically by changes in the air passages. It never prevails in an epidemic form, nor has it ever exhibited any contagious property. Diphtheria, on the contrary, is both a specific and an infectious disease, and while it is capable of producing death by the severity of the local symptoms, it also profoundly affects the constitution and composition of the blood. While such a thing as diphtheria of the larynx may manifest itself primarily, in the far greater proportion of cases it occurs secondarily, and by extension of the disease from the pharynx, which latter point is where the deposit is first seen in nearly all cases. The infectiousness of the diphtheritic virus, notwithstanding the sporadic cases that occur without infection, is now pretty well conceded on all sides. Oertel, one of the latest, and probably the most able writer on this subject, takes the view that the diseased processes are due to the presence and

rapid multiplication primarily on the fauces, and secondarily in the blood and other fluids of the body, of a multitude of minute organisms, the *bacterium-termo* and *bacterium-sphero* of Cohn, and termed by him *micrococcus*. Whether Oertel is right in attributing the disease to these minute organisms, Dr. Heustis said he was not prepared to say. He also stated that while it might be true, as Oertel maintains, that in its earliest manifestations, diphtheria is a purely local malady, it is an acknowledged clinical fact, often demonstrated in his own experience, that it may and does become a constitutional disease of the gravest character. Frequently, when the local manifestations in the pharynx are comparatively slight, the patient is overwhelmed by the extent and severity of the constitutional symptoms. Again, in croup we have no sequelæ save the slight manifestations of anæmia likely to follow any disease. In diphtheria, on the contrary, the sequelæ are often prolonged and distressing, often supervening upon an apparently mild attack. Dr. Heustis closed by saying that in every stage of the two diseases there were certain characteristics that served, more or less, markedly to distinguish the two. And while certain persons of eminence and authority in the profession had given their countenance and adhesion to the doctrine of the unity of the two diseases under discussion, he was clearly of the opinion that they should be considered separate and distinct.

Dr. E. P. Gaines said that he was of the same opinion as Dr. Heustis, in so far as the non-identity of the two diseases under discussion was concerned, but advanced a somewhat different line of argument to prove his position. First, he gave a graphic description of the onset, severity, and even apparently alarming symptoms likely to supervene on an attack of spasmodic croup, which, however, was one of the most simple and easily managed of all diseases when vigorously and properly handled. Secondly, catarrhal croup, or mild inflammation of the larynx, is attended with slight cough and more or less hoarseness, especially at night, and it may be accompanied with more or less symptoms of laryngeal spasm, and it usually follows exposure to cold, changes in the weather, &c. Then the true membranous croup the doctor claimed to be a disease of the robust and especially of male children—which facts he remarked upon as diagnostic points of difference between this and diphtheria. He said that no one could read the graphic descriptions of the disease, among the records left us of the practice during the latter part of the last and early part of the present century, without being forcibly impressed as to the sthenic character of the disease, and the great success of the antiphlogistic method of treatment then

practised. And while he honestly believed that the types of disease had undergone a change since the period of some of the practice referred to, he was of the opinion that membranous croup, as compared with diphtheria, is still a sthenic disease. Diphtheria, on the other hand, is an asthenic disease; moreover, it does not show any predisposition to attack one sex more than another, and so far from selecting the most robust for its victims, it is a well known fact that feeble children and those of impaired vitality, are those who are most likely to suffer severely. Dr. Gaines said he was aware that some of the best modern physicians had given their adhesion to the doctrine that membranous croup and laryngeal diphtheria are convertible terms, and mean one and the same disease. He then read extracts from the last edition of Watson's *Practice*, wherein that eminent practitioner affirms his belief as to the truth of the foregoing proposition. He also quoted, from a late clinical lecture by Sir Wm. Jenner, the following paragraph: "I am not sure that it is true; but as I formerly taught that the weight of evidence was in favor of their non-identity, I am now inclined, from my further experience, to think that the two diseases are identical—that the so-called croup is really diphtheria." Dr. Jacobi, of New York City, to whom Dr. Gaines gives the credit for having contributed a most admirable paper on this subject says, "he hoped the vexed question of difference between diphtheria and croup is now finally settled, and their identity established." Dr. Gaines said that, notwithstanding the very high authority arrayed in the affirmative, he could not but demur to the proposition that they are identical. To support his views, he quoted Rokitansky in proof of a histological difference in the two membranes.

Dr. G. A. Ketchum said he thought the distinction Dr. Gaines had made as to the sthenic or asthenic character of the two diseases, was not well taken, as cases are frequently seen where, in the early stage of diphtheria, the febrile reaction seems very high, and *vice versa*. He then read extracts from a paper by Dr. J. Lewis Smith, of New York, in the *Virginia Medical Monthly* (Feb., 1875), who maintains that the researches that his friend, Dr. Keitzmann, and he have made with the microscope tend to show that the exciting cause of diphtheria is something more remote than the mere presence of living micrococci, and that their enormous increase is only one of the effects of the disturbing cause, whatever that may be.

In Wraysbury (England) there lives a woman who, according to the *Lancet*, is mother of 27 children.

RICHMOND ACADEMY OF MEDICINE.

August 5th.—**Hydatido Accompanied with Altered Structure of the Uterine Walls—Intra-Uterine Hemorrhage—Death—Autopsy.**—Dr. W. W. Parker reported that, on July 10th, he was called to see Mrs. B., a pale, delicate woman, age 26, who had given birth to a child two years old; nothing unnatural connected with the confinement or getting up. At the present visit, she stated that she had not menstruated for two months, and thought it probable that she was pregnant. She had not been very regular in her periods for some time. No examination of the abdomen or of the uterus was made at this visit. She complained of the ordinary symptoms of dysmenorrhœa—severe pain with slight menstrual discharge. She had evidently been out of health for some days. Camphor and opium were prescribed, and rest enjoined, with other usual directions in such cases. The pulse was rather quick and irritable.

Dr. P. saw her again on the 11th and 12th July. On the occasion of the latter visit she seemed so much improved that he did not call again until 14th. At this visit, the sanguineous uterine discharge had increased, and he was inclined to believe that the symptoms were indicative of threatened miscarriage. Ordered continuance of opiates, with ice cold drinks and perfect quiet.

On 15th and 16th there was improvement in her condition, and the Doctor did not see her again until Sunday, 18th July, when he found the patient dressed and sitting up in an adjoining room. He chided her for her imprudence, and stated that a great many patients got better on Sunday, at which remark she laughed heartily. On examining her pulse, he found it still quick and irritable. Her appetite had not been good, but was now improved. Her bowels had been kept in a soluble condition. This lady belonged to that small class of patients who do not like unnecessary visits on the part of her physician, as she expected *to pay*. After enjoining absence from all labor, and as much rest as it was practicable for her to obtain, he left with the request to be sent for on the occurrence of any unfavorable change in her condition. He was not surprised when sent for in haste July 20th. He found the patient in bed, suffering intense agony in the uterine region, countenance anxious, pulse quicker than ever, and more irritable, with increase of the sanguineous discharge. On vaginal examination, the neck of the uterus was found elongated and indurated, and the os tincæ admitted only the point of the finger, but was not dilatable. On assing the hand over the abdomen—above the pubes—a tumor as discovered about the size of an infant's head, which the

Doctor recognized as an enlarged uterus. He saw the lady again in the afternoon. The case not having improved under treatment, he requested Dr. O. Fairfax to meet him on the morning of 21st. At this consultation, on passing the hand over the abdomen, he found that the uterine tumor had increased more than double its size since the previous visit, in spite of a decided increase of the hemorrhages. It was hard, perfectly round, occupied the median line of the body, rose fully half way up the umbilicus, and was elastic on firm pressure. The examination of the uterus itself per vaginam showed no change in the previous condition of the os and cervix. It was evident that this rapid increase in the volume of the uterus was due to intra-uterine hemorrhage. The question arose as to how to arrest the hemorrhage which was taking place in the womb, and which had enlarged that organ to the extent indicated. One suggestion was to use intra-uterine injections of solution of per. chloride of iron, but this was objected to because it would solidify the effused blood, and prevent its expulsion, and because of the condition of the os, ergot was not admissible. The treatment finally decided upon was to support the patient with nutritious diet and moderate stimulants, and wait upon Nature. Her pulse was strong enough to justify this delay. Dr. P. visited the patient twice during the afternoon and evening, but detected no amelioration in her condition; on the contrary, he found that the uterus was gradually enlarging, while the hemorrhage continued to flow from the vagina. The lady also showed signs of loss of blood. The diagnosis being very obscure, and the patient being evidently in great peril, Dr. P. invited Dr. J. G. Skelton to join in the consultation next morning, 22d July. At this meeting, the uterus was found mounting up as high as the umbilicus, ovoidal in shape, and projecting forward over the pubes because of relaxation of the abdominal walls. The patient was very ex-sanguine in appearance, extremely exhausted, and delirious at times. The gravity of the case had greatly increased since the last visit, and the prognosis was grave in the extreme. It was determined to dilate the os with a sponge tent, and to push the administration of milk punch—a gill every two hours. It was not until the next visit (in the afternoon) that a sponge tent could be found large enough for the purpose. Chloroform inhalation was now substituted for the opium previously used to relieve the pain, as it was feared that the large amount of opiates retarded uterine contraction, while they did cause constipation. After some delay, the tent was introduced, and fixed in the os tincæ by filling the vagina with a large piece of sponge. On visiting the patient early next morning (July 23d),

Dr. P. removed the sponge, found the tent in position, and upon removing it, succeeded in introducing two of his fingers into the uterus, which came in contact with a soft, elastic mass. During this operation, there was but little discharge of blood. Dr. P. remarked that he forgot to mention that two days previous (July 21st) he had passed a female catheter about three inches into the neck of the uterus, which encountered some soft, yielding substance, but no hemorrhage followed. Ergot was now (July 23) ordered in large doses every 15 or 20 minutes, but not with much hope of success, as the patient was evidently sinking. She died before the next consultation, which was to have been held about mid-day. It is of interest to remark that on the night of the 21st, the hemorrhage was so profuse that it ran through the bedding upon the floor. It may also be stated that on the occasion of the last visit, finding the uterus opened by the tent, Dr. P. used firm pressure over the uterus with both hands, hoping thereby to aid in the expulsion of its contents. On removing this pressure, air was heard to enter the uterus per vaginam, both by the Doctor and by some of the bystanders. Pressure by means of a pad and a bandage over the uterus was also attempted.

Autopsy 20 *hours after death*—Present, Drs. Parker, Fairfax, Skelton and F. B. Watkins.—On making an incision from the navel down the linea alba to the pubis, the womb was discovered. It was about 8 inches long by 5 across—external measurements. Its surface was pale and exsanguine. On laying open the organ along its longitudinal axis, a mass was discovered occupying the cavity, which resembled fine seine immersed in a bloody, gelatinous fluid, which was removed by handfuls—probably from a pint to a pint and a half. This mass was composed of hundreds of hydatids, varying in size from that of a pin's head to that of an almond—some white, some red—connected together by a tenacious, gelatinous fluid. Many of these hydatids were necessarily broken in their removal. There were no clots of blood in the uterus, and the amount of fluid blood did not exceed an ounce. A large quantity of blood, however, must have escaped per vaginam after her death. The walls of the uterus were found to be thickened—probably were $\frac{1}{4}$ of an inch thick. The internal surface were covered by false membranes, firmly adherent to the uterine walls, and were so disposed as to give them an appearance not unlike the columnæ carnæ of the heart—though probably the fibres of the former were not altogether as large as those of the latter. It was difficult to detach them with the thumb nail from the walls of the uterus. No ovarian disease was discoverable. No other organ than the womb and appendages were examined.

One important lesson, Dr. P. thinks, may be learned from this case, and that is, where from any cause blood in large quantities is poured out into the cavity of the womb, and little or none of it is escaping, measures should be taken promptly to aid in its escape. This must be, of course, by *dilatation*. In a case of urgency, where you cannot wait for the somewhat slow process of dilatation by the sponge tent, chloroform might be used. He thinks that under chloroform the womb, or the mouth of it, might be rapidly dilated—by the finger, or a bougie, or Barnes' dilator. Not only might forcible dilatation be practised, but any resenting membrane which might present itself at the mouth of the womb obstructing the discharge might be punctured or removed so as to let the blood escape and thus permit ungent or astringent injections, or some other of the means usually employed to arrest uterine hemorrhage.

August 19.—Dr. F. D. Cunningham reported

Nine Cases of Diphtheria Occurring in one Family occupying a tenement house in a central part of the city, originating spontaneously, the disease not extending beyond that house or family. On the 5th of July, he visited one of the children, a boy 7 years of age; prescribed for a sore throat, which was considered of a simple nature, and the patient was apparently well and out in two days. On the 9th of July, an older brother, aged 9, was taken sick with fever and sore throat. This also was treated with a purgative and a gargle of chlorate of potash, but it lasted for three days. There was nothing like a membrane about the fauces, although, when first seen, there were several whitish deposits about the orifices of the follicle of the tonsils. The patient appeared much weakened, considering the length of the attack, and being naturally thin and rather delicate, an iron tonic was ordered, whilst he was permitted to go out on the fifth day. The attention of the family was called to the fact that for a week or more after his getting out of the house there was an unusual and profuse discharge from the nostrils, which gradually passed off without treatment. On the 25th of July, the youngest child, a boy of about two years and seven months, was taken with high fever and sore throat. For three or four days there was no deposit on the fauces, and then a doubtful, thin and fully organized deposit appeared in spots, but nothing like a false membrane. The character of the deposit becoming more like that of diphtheria, on the 5th day an examination was made of the urine, and it was found to be heavily charged with albumen. In view of the order of invasion of the previous cases, and the condition of the last one, it was now positively concluded that the disease was genuine diphtheria, and steps were taken to pro-

tect the other children from contagion. On July 31, the mother of the children complained of sore throat with slight fever and malaise, but there was no throat deposit. On the morning of August 1, one tonsil was covered with diphtheritic deposit, and the patient was greatly prostrated and debilitated. After this, there were attacked in regular succession, the grand-mother, another child 4 years old, two colored nurses, and an elderly white woman who acted as nurse in the emergency. *In fact, every one who slept in the chamber after the first well marked case appeared* was taken down with the disease, and presented the characteristic features of it for various periods of time, extending from 7 days to 3 weeks—the adults having the membrane to last for a much shorter time than the children. No doubt their speedy relief was due to the fact that the local applications could be more efficiently used. The treatment used in all the cases was, first, a mercurial purgative, repeated when the action was not positive, then the free use of the tinct. ferri. chlorid. internally, with chlorate of potas. wash, and the local application of spts. terebinth. two or three times a day to the fauces. Two of the children and one of the colored nurses came out of their attacks with paralysis of the muscles of the palate, from which they are gradually recovering. Thus far, there has been no other unpleasant sequelæ. During the treatment, and since convalescence, every inducement was offered to make the patients partake of the most concentrated and nutritious diet. A feature worthy of note in one of these cases is to be found in that of the colored nurse who was left with paralysis of the palate. This patient, some ten years ago, had a severe attack of diphtheria, but she finally recovered after several months' illness, during which time she lost the power of speech, and nearly died of starvation, consequent upon paralysis of the muscles of deglutition. This patient had high fever from the first, with great and unusual pain on swallowing; but at no time was there any appreciable membrane about the fauces, though one side of the throat had recovered, and the patient returned to the house before the other side became at all affected. In neither of the colored nurses was the debility so marked as it was in the adult whites. In the treatment of the later cases, Dr. C. was aided by Dr. O. Fairfax, who expressed no doubt as to the nature of all the cases seen by him.

In looking for the cause of this local epidemic, no agent could be found operating on these premises which did not prevail to an equal extent in the adjacent tenements, and a close inspection could develop nothing positive beyond the fact that all of the buildings in the row had defective water supply; and thus

the water-closets, located in the back porches of the second floor, would, unless great care was taken, sometimes become offensive. The children, when first taken, slept in the third floor front room, with good ventilation all the time. In the house in question, more than ordinary care was taken at all times to do away with the bad effect of a short water supply by catching a supply of water in the bath-tub at night with which to flush out the closet, and also by the liberal use of disinfectants in every part of the premises; so that, at the time the disease appeared, there was as little to offend the senses of sight or smell on these premises as on any in the city. Why this epidemic should have occurred here whilst the neighbors escaped, thus far remains a mystery.

From what took place afterwards, it may well be supposed that the first two cases were also cases of diphtheria, and hence the number is put down as nine, although a positive membrane was only to be recognized in seven.

Additional interest may obtain to the history of the endemic by a slight reference to the medical history of the occupants of this house for the past 25 years. About 20 years since, the gentleman occupying this house lost four of his children in a short time from malignant scarlet fever. The two succeeding tenants had no sickness of consequence, though in one of the families a young lady visitor had scarlet fever. It was then occupied for some years by a distinguished physician, now deceased, whose wife died of diphtheria, supposed to have been contracted whilst nursing a young relative in another part of the city, as none of the other members of the family had it. After the removal of the physician, it was occupied by a large family that had little or no sickness; and for three years past the present tenant has occupied it with his family of five children, wife and himself, during which time he has had as little if any kind of sickness as any family of the same size in the city. A careful review of the history of the families formerly occupying these premises do not warrant the belief that the present epidemic can be due to any cause which could have continued from year to year during the time mentioned, whilst the contagious nature of the disease in the present epidemic seems clearly established by the regular order in which the successive nurses of the children were attacked.

School for Nurses.—The Commissioners of Public Charities and Correction, New York, opened a School for Nurses at Charity Hospital, New York, on August 1st.—*N. Y. Med. Jour.*

Analyses, Selections, &c.

Rapid and Forcible Dilatation of the Female Urethra.—We reprint from *Trans. Med. Soc. North Carolina*, 1872, the following cases, reported by Dr. Henry T. Bahnsen, Salem, N. C., not only because of their special value, but also because of the fact that in a very interesting and valuable *Report on Diseases of Women for the year* 1874, by Paul F. Mundé, M. D., published in the August No., 1875, of the *Amer. Jour. Obstet. and Dis. Women and Children*, the remark is made by Dr. Mundé, "prior to the year 1874, I have been able to find only two publications on the subject—both in 1872." We are sure that the cases here reported by Dr. Bahnsen, which occurred *prior to the date mentioned*, are equal in interest to any of those referred to by Dr. Mundé. We might also refer Dr. Mundé to two interesting cases reported by Dr. R. H. Gale, Louisville, Ky., in *Trans. Kentucky Med. Soc.*, 1874, and republished in the August No., 1874, of the *Monthly*. The forcible dilatation of the urethra in the first of these cases was performed by Dr. Gale in *May*, 1872, and in the other by Dr. Isaiah H. White, of Richmond, Va., *August* 15, 1872. But the following are the cases as reported by Dr. Bahnsen:

In July, 1869, I accompanied Dr. Shaffner, of this place, to a case of supposed stone in the bladder, to assist in the operation. The patient was a married lady of 65, who had for many years been delicate. For two years she had been confined to her house, suffering excruciating agony in the region of the bladder and its exit. The pain prevented sleep, and she had made use of all the principal narcotics in town to procure temporary relief. Her attending physician (not Dr. Shaffner) finally discovered a stone in her bladder. She had the principal subjective symptoms—difficulty in passing water, the stream sometimes stopping, and straining of a most agonizing character. She was etherized and the interior of the bladder was carefully explored with the sound. No stone was detected. The urethra was then forcibly dilated until the index finger could be passed into the bladder. By manipulation with the other hand on the abdomen, the whole interior surface of the bladder was easily caused to pass over the point of the introduced finger. There was no calculus to be found. We were completely at a loss, but of course refrained from further operative procedure. Much to our surprise, the lady recovered entirely, and has to this day suffered not the slightest inconvenience or difficulty in micturition.

A little less than a year ago, I visited an old lady who had been under treatment by several physicians for years without obtaining relief. Her symptoms were similar to those of the patient above mentioned. On attempting to introduce the sound into the bladder, I found the internal urinary meatus disposed to contract upon it, and my patient was almost convulsed with agony. I obtained permission to make one more trial, and for this purpose selected an unusually large bougie, of perhaps $\frac{3}{8}$ inch in diameter. This passed with scarcely more pain and difficulty than the small sound. Some blood followed its removal, but the woman expressed herself relieved, and her symptoms have not returned to the present day.

During Easter week of this year, I had a precisely similar case on my hands. **** Under the influence of chloroform, the urethra was dilated with bougies until I could pass my index finger into the bladder. She has entirely recovered.

Evidently the trouble in all three cases was spasmodic stricture of the urethra. There was no history or symptom of prior inflammation. Prof. Gross, in his *Surgery*, treats the subject very cursorily, and recommends *gradual* dilatation. A number of surgeons, among them the young Storer, of Boston, rupture without hesitation the sphincter muscles of the anus and vagina, in their treatment of vaginismus, fissure of the anus, hemorrhoids, &c.; but I am not aware that any have recommended a similar practice in such cases as are mentioned above.

As an instance of the extent to which forcible dilatation of the urethra may be safely practised, allow me to exhibit this calculus, obtained from the bladder of a female patient by this method. Its weight is a few grains less than $1\frac{1}{4}$ ounces, avoirdupois, and its measurements $4\frac{1}{2}$ and $4\frac{1}{4}$ inches in its greatest and least circumference respectively. The patient was about 21 years of age. Eleven years before, she was afflicted with some inflammatory disease of the bones of the pelvis and both femora. **** The patient had all the symptoms of stone in the bladder in the most aggravated degree, and when I visited her, her suffering confined her to her bed. Examination detected a calculus of large size. The great thickening and breadth of the pelvic bones precluded a supra-pubic operation, and the only way to extract the stone was through the urethra. With the foregoing cases impressed upon my memory, I naturally preferred dilatation to incision. She was placed under the influence of chloroform, and after several hours of careful manipulation, I had the satisfaction to withdraw through the urethra the calculus I here exhibit. There was no great hemorrhage or subsequent suppuration, and the poor creature recovered without a

bad symptom. When I last saw her, about four weeks after the operation, the urethra had so contracted that I could only with difficulty introduce the index finger, and she could control the bladder very well. Since then she has sent me word that she can now hold her urine as long as six hours.

Insulation of Beds in Rheumatism.—Dr. J. J. Summerell, Salisbury, N. C., reports (*Trans. Med. Soc. N. C.*, 1875) three cases—the only ones in which he has insulated rheumatic patients—which leads him to believe the treatment is worthy of further trial.

On Jan. 18, he was called to Annie C., 8 years old, three days after seizure with a severe attack of rheumatism of the lower extremities and one shoulder—just such a case as formerly would have been freely bled. He gave mercury to open the bowels, opium to relieve pain, and adopted the usual alkaline treatment. In three days, she was in every particular improved. He then insulated the bed by placing a glass tumbler under each bed post, as recommended by Dr. Wagenhal, and continued the other treatment. The next day she was in every respect improved. Treatment continued, and next day added quinine, gr. x, in three doses three hours apart. Two days later, she was quite comfortable, and in seven days after insulation was begun, walked about the house, and her convalescence was speedy and satisfactory.

On Feb. 7, he was called to a lad, 12 years old, who was seized the day before with rheumatism in the ankles, knees and one hip, and was suffering excruciating pain. Treatment same as in other case. Medicines acted freely next morning; he had slept during the night, and was decidedly better; could move his joints a little without pain. In 48 hours he got out of bed without aid, and all rheumatism left his joints in a few days. But he suffered pain in the region of the bladder, and retention of urine, which was relieved by the catheter for 3 or 4 days, when pain subsided, and the functions of the bladder were re-established. There was, however, no articular pain after the first three days of insulation. Opium acted badly with him; hence little was used.

April 3. Dr. S. attended Mary B., 14 years old, already down four days with acute rheumatism of ankles and knees. Treatment same as in former cases, with addition of stimulating anodyne liniment. He did not see her again, but in three days she had but little pain in the joints, missed her evening return of fever, and was in every way comfortable. Reduced doses of quinine were continued three or four days. She was up and about the house in a week after the doctor's visit.

Editorial.

MEETINGS OF MEDICAL SOCIETIES IN RICHMOND.

The *sixth session* of the *Medical Society of Virginia* will convene in Richmond at 7½ P. M., Wednesday, October 20th, 1875, in a hall to be designated in a circular to be issued about Oct. 1st. Every indication is that this will be a "grand rally" of the profession of the State. Every regular physician in Virginia who has not yet connected himself with the Society—organized to promote scientific and general professional interests—is earnestly requested at once to forward his application for membership, endorsed by any member of the Society. Committees are urged to have their reports ready for presentation; and all members having papers or reports of cases in course of preparation, or in contemplation, are requested to have them ready for handing directly to the Committee on Publication immediately after presentation to the Society.

The Association of Medical Officers of the Confederate Army and Navy will convene at the same place at 11 A. M., Tuesday, October 19th, 1875. All communications for this Association should be addressed to the President, Dr. S. P. Moore, Richmond, Va., or to the Secretary, Dr. S. H. Stout, Atlanta, Ga.

Every effort will be made to secure the usual reduced fare over railroads, boat lines, &c., which, as far as practicable, will be announced in the forthcoming circular. It is a pleasure, however, to announce at this early day that the proprietor of St. James Hotel—*one of the very best in the State in every respect*—has agreed to charge members and delegates with their families, who may attend, only *two dollars* per diem during the period in which either or both of these Societies may be in session.

Books, &c.—Space allows only of mention of publications received, some of which will be noticed hereafter: *Paralysis from Brain Disease*, by H. Carlton Bastain, M. A., M. D., F. R. S., etc. (D. Appleton & Co., 1875), for sale by West, Johnston & Co., Richmond, Va., $1.75; *Transactions Medical Society of North Carolina*, 1875; the following *Amer. Clin. Lectures*, published by G. P. Putnam's Sons, New York: *Rest in Treatment of Nervous Disease*, by S. Weir Mitchell, M. D.; *Treatment of Sciatica*, by W. H. Thompson, M. D.; *Otitis*, by C. R. Agnew, M. D.; *Capillary Bronchitis of Adults*, by Calvin Ellis, M. D.—all excellent and standard; *The Extension Windlass* (reprint), by Charles Dennison, M. D., of Denver, Colorado; *Proceedings of Georgia State Board of Health; Treatment and Removal of Fibroids of the Uterus*, by Dr. T. A. Emmet, N. Y.

MORTUARY STATISTICS OF SOUTHERN CITIES FOR JULY, 1875.

MOBILE.—"Since abatement of yellow fever at Florida Barancas, little apprehension is felt. One of the fatal cases of peritonitis followed Cæsarean section. The case of pemphigus occurred in the infant removed by Cæsarean operation. The infant lived three days. City still quite healthy."

LYNCHBURG.—"We have had little disease with us. No epidemic."

(Compiled from Reports of the several City Boards of Health.)

Cities	RICHMOND, VA.				NORFOLK, VA.				LYNCHB'G, VA.				MOBILE, ALA.				SELMA, ALA.				ATLANTA, GA.			
Health Officers, ... Doctors	J. G. Cabell.				Wm. M. Wilson.				R. S. Payne.				W. D. Bizzell.				John P. Furniss.				E. L. Connally.			
Population	Census Feb., 1874, though estimated at 65,000.				Estimated.				Estimated.				Census 1870. In addition 1,200 Creoles are estimated				Estimated.				Census 1873, the estimate is 35,000.			
	White. 33,452		Colored. 27,213		White. 12,500		Colored. 9,500		White. 7,000		Colored. 7,000		White. 18,115		Colored. 13,919		White. 3,500		Colored. 4,000		White. 18,526		Colored. 11,607	
Sex	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M	F.	M.	F.
Number of deaths	44	51	50	56	16	13	9	21	10	7	14	10	19	16	23	33	4	2	1	7	00	00	00	00
Number still-born in addition	3		5		2		3		0		3		0		5		1		0		0		0	
AGES. Ages unknown not calculated. Under 1 year	42		52		Color not given, 26				9		11		5		12		5		3		No report.			
" 3 years	17		13		" 3				3		1		4		9		1		2					
" 10 "	2		3		" 3				...		3		2		3		...		1					
" 20 "	1		10		" 2				...		...		4		4		1		...					
" 30 "	6		5		" 5				1		1		5		5		...		...					
" 40 "	6		3		" 2				...		...		4		4		...		1					
" 50 "	6		5		" ...				1		1		1		4		...		1					
" 60 "	7		3		" 2				1		2		3		4		....		...					
" 70 "	3		5		" 3				...		3		5		6		...		...					
" 80 "	4		8		" 4				...		2		2		1		...		...					
" 90 "	1		3		" ...				1		...		...		3		...		...					
" 100 "	...		...		" 1				1		...		...		1		....		...					
Over 100 "	...		...		" ...				....		...		....		...		...		...					

CAUSES OF DEATH.

Accidents, Suicides, Wounds, &c	1	4	1	2	1	2	2	1	2	1	No report.
Angina Pectoris	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	
Apoplexy	2	1	.....	.....	.....	1	.....	1	.....	.....	
Ascites, Dropsy, &c	1	.....	.....	4	.....	.....	.....	1	.....	.....	
Birth, Premature	2	.....	.....	.....	.....	.....	.....	.....	4	1	
Bladder, Inflammation	.....	.....	1	.....	.....	1	.....	.....	.....	.....	
Bright's Disease	.....	.....	.....	.....	.....	.....	.....	1	.....	1	
Cancer	1	.....	.....	.....	.....	....	.....	.....	.....	2	
Cholera Infantum	30	32	2	2	.....	.....	2	.....	.....	.....	
Colic	.....	.....	.....	.....	.....	.....	...	.....	1	.....	
Congestion Bowels, Brain, Lungs, &c	2	2	.....	1	.....	.....	1	2	.....	2	
Consumption	9	14	1	1	.....	.....	5	5	1	2	
Convulsions	2	7	.....	4	3	.....	1	1	.....	.....	
Croup, Pseudo-Membranous	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Cyanosis	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Diarrhœa & Dysentery	10	9	5	8	3	1	4	3	1	.....	
Diphtheria	.....	1	.....	1	.....	.....	.....	.....	.....	.....	
Enteritis, Gastro-enteritis	4	1	2	.....	.....	1	.....	.....	1	1	
Epilepsy	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Fever—Congestive	.....	.....	.....	.....	.....	.....	1	2	.....	.....	
" Remittent	.....	.....	1	.....	.....	1	.....	3	.....	.....	
" Typhoid	4	3	.....	.....	.....	.....	2	1	.....	.....	
Heart Disease	4	6	1	.....	.....	.....	.....	.....	.....	.....	
Hemorrhage, Lungs, Bowels	3	.....	.....	.....	.....	.....	1	.....	.....	.....	
Hydrocephalus	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	
Ileus	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
Inanition, Old Age, &c	6	6	3	1	2	.....	3	6	.....	1	
Labor, Protracted	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	
Leucocythæmia	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Liver Disease, Abscess, Inflam	1	.....	1	.....	.....	1	.....	1	.....	.....	
Meningitis	2	1	1	.....	.....	.....	.....	.....	.....	.....	
Meningitis, Cerebro-Spinal	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	
Mesenteric Disease	.....	.....	.....	.....	.....	.....	1	2	.....	.....	
Paralysis, General	1	3	.....	.....	.....	1	.....	.....	.....	.....	
Pemphigus	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	
Peritonitis	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	
Pneumonia	1	.....	1	.....	.....	...	.....	.....	.....	.....	
Purpura	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Rectum, Occlusion of	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	
Rheumatism	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
Scarlatina	.....	.....	3	1	.....	.....	.....	.....	.....	.....	
Stomach, Ulcer, Tumor	1	1	.....	.....	.....	.....	.....	.....	.....	.....	
Syphilis	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	
Teething	.....	2	2	4	1	.....	1	5	.....	.....	
Trismus Nascentium	.....	.....	.....	1	.....	.....	1	1	.....	.....	
Unknown or Ill-Defined	.....	10	1	.....	.....	15	1	.....	.....	.....	
Whooping Cough	.....	.....	1	.....	.....	.....	.....	.....	1	.....	
Worms	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	

Obituary Record.

Dr. Hugh Holmes McGuire died in his 75th year, at his home in Winchester, Va., August 9th. He had been in declining health for a few years past, which caused him to retire from active professional labor; but the more immediate cause of his death was attributed to a fall he received about two months ago. Dr. McGuire was an eminent surgeon, and enjoyed a large and lucrative practice. Prior to the war, he was a frequent contributor of valuable articles to medical journals. He was the founder of, and Professor of Surgery in, the Winchester Medical College. This institution was in a flourishing condition until the commencement of the late war, during which all the buildings were burned by the Federals, which brought the institution to a final close Dr. McGuire died as he lived—a noble specimen of humanity. Now that his life work is done, he has retired "to the house appointed for all the living." Happily for him, he was prepared for the summons, and died in peace—leaving the legacy of an untarnished name to his family, and an example worthy of imitation by the profession.

The *Lexington* (Va.) *Gazette* truthfully says of him:

"It was no wonder he was so generally beloved and respected. Even those who were not among his friends could not but accord to him the virtue of honor and truth. And those who knew him well, can never forget tha cordial and genuine affections of his heart, and the direct and powerful operations of his mind on all questions of his profession, and of private or public interest."

At a called meeting of the Frederick County Medical Society, Aug. 10—Dr. R. J. M. Holliday in the chair—on motion of Dr. T. M. Miller, Drs. W. S. Love, T. C. Williams and J. W. Owen were appointed a committee to draft suitable resolutions. The following were framed by the committee and adopted by the meeting:

Whereas, On August 9, 1875, Hugh H. McGuire, M. D., one of the original Fellows, and the first President of this Society, departed this life at the advanced age of 74 years: therefore,

Resolved, That this Society enter upon its records its high appreciation of the long continued and valuable services rendered by him to this community, in whose midst his whole life has been spent.

Resolved, That while mourning the loss of one of the oldest and most distinguished medical men in the State, we take pleasure in testifying to the record of so honorable and successful a professional life, in which he attained a high rank both as a skillful practitioner and learned instructor. His blameless conduct, great moral worth and humane deportment ennobled the profession of which he was an honored member. As Professor of Surgery in the Winchester Medical College—of which he was a founder—he attained great eminence, and enjoyed a reputation as a Surgeon second to none in the State.

Resolved, That we attend the funeral in a body.

Resolved, That a copy of this expression of our esteem and sympathy be transmitted to the family of the deceased, and that proper publicity be given to the same.

W. A. Bell, M. D., Secretary.

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Original Communications.

ART. I.—*Belladonna Poisoning.* By WALTER COLES, M. D., St. Louis, Mo.

There are in our materia medica a number of drugs possessing wonderful power over the vaso-motor system, and probably of much prospective value to the physician, which are attracting marked attention at the present time; and although the journals teem with accounts of experimental research, comparatively little is definitely known of the laws governing their action on the human subject. One of the oldest and best known of these is *belladonna*, but yet its clinical application remains in an exceedingly crude and unsettled state. With few exceptions, its exhibition in disease is purely theoretical or empirical; hence any practical contribution to its toxical or clinical history is not devoid of value. The following case of poisoning by this agent, to which I was called in consultation by Dr. Boisliniere, of this city, a short time since, presents several points of unusual interest:

Mrs. S——, a healthy lady, aged about 40, took by mistake a sherry wineglass full (two ounces) of a liniment composed of one ounce each of tinct. belladonna, tinct. aconit. rad., and chloroform, mixed with liniment. chloroformis ℥v. The chloroform and oil having settled to the bottom of the vial, it is probable that she got an undue proportion of the tincture of aconite and belladonna. She recognized her mistake at once, but, imagining that there was nothing in the mixture to work serious injury, contented herself with a swallow of water to relieve the burning. In a few moments, however, she became dizzy and fell to the floor in a state of syncope. In the course of half an hour

there was spontaneous retching and a partial evacuation of the stomach.

It was nearly two hours before Dr. Boisliniere reached the patient and administered an emetic, which acted. The doctor states that he found her dazed and prostrated, with a rapid and thready pulse, flushed neck, temperature normal, pupils widely dilated, respiration irregular and sighing, tongue and throat dry, and articulation difficult. Some aromatic spirits of ammonia and musk were administered at frequent intervals during the night, and continued, with large doses of bromide of potassium during the succeeding three days, at the end of which time there was but slight improvement, except that the patient had rallied somewhat from her extreme prostration; her mental faculties had not recovered—there being much confusion and obtuseness of intellect, with hallucinations.

It was at this juncture that I saw her—my visits being continued from the 24th of April to the middle of May. On observing the patient, she presented, at first glance, no unusual appearance, save that the pupils were dilated; there was no special suffusion about the eyes; no flushing of the face, which was a shade paler than usual; the skin was normal; tongue and throat extremely dry, interfering with articulation and deglutition; pulse over 100 and very feeble.

The urgent symptoms of the first few days having subsided, the point of chief concern now was the mental condition, which so completely simulated insanity (which was unknown in the family) as to occasion much anxiety on the part of her friends. On my being introduced, she showed signs of intelligent recognition, but soon lapsed into a rambling talk, fancying herself in Paris, waiting at her hotel for the departure of the train. Again, she would point to the beautiful golden fish in her bed, or to numerous birds and other (imaginary) pets. The legend that *belladonna* takes its name from the visions of beautiful women said to flit through the dreams of those under its influence, was, in one sense, substantiated in this instance; for, though our patient's perceptive faculties were all awry, none of her delusions were of a disagreeable character—as in *delirium tremens*—excepting fancied conversations between her attendants, in which she sometimes imagined that unfriendly or disrespectful allusions were made to herself; these, however, rather annoyed than frightened her. There was perfect recognition of those in the room, although persons and things were constantly called by wrong names. Indeed, there was marked *amnesia* throughout her illness, frequently imparting to her language an appearance of incongruity, which, however, she would sometimes correct of

her own accord, or else give signs indicating vexation at her inability to find the proper word. Whenever she was first aroused and her attention fixed upon any subject, she would converse rationally; but it evidently required a strong effort of the will to prevent her ideas from wandering, and any excitement or prolonged talking would invariably lead to absurd hallucinations, and an utter break down in the chain of thought. All idea of time seemed to be obliterated; her husband, who happened to be absent from the city at the time of the accident, returned at the end of a week, and, although recognized, his previous absence was forgotten. There was absence of muscular tremor and of pain, either in the head or elsewhere—only a feeling of numbness in the lower extremities, with some unsteadiness of gait on attempting to walk. Vision was only partially impaired; could read with difficulty—the sense being obscured by the miscalling of certain words. The patient had naps of refreshing sleep, uninterrupted by delirium, though during waking hours she was easily excited and exceedingly restive of restraint; indeed, the chief burden of her complaint was the espionage to which she was subjected. The bowels and urinary organs performed their functions normally.

The foregoing is a fair depiction of this case at the time that I first saw it. It was evident that whatever influence the aconite and chloroform contained in the mixture taken had exerted in the beginning, their operation was now overshadowed by the belladonna. If the other ingredients had exerted any antidotal power over the latter, it was apparent that it had been exhausted, and left us to deal only with the effects of the belladonna; and the question was as to the real condition of the patient—was she suffering from cerebral *congestion* or *anœmia*? This was certainly a very nice point to determine, as on the correctness of our conclusion the safety of the patient hinged. Taking into consideration the history of the case, feeble state of the pulse, and the general condition of the patient, we inclined to the opinion that there was insufficiency of blood in the brain. Independent of any *history of poisoning*, this would have been the inevitable conclusion. There was a striking similarity in many of the symptoms to those occasionally manifesting themselves in persons whose brains have been overtaxed, and where there is insanity from pure mental exhaustion.

As there were no urgent indications, we determined to feel our way cautiously, hoping that in a few days the toxical symp-

toms would pass off. Twenty grains of hydrate of chloral were ordered, to be repeated two or three times a day if required. For the first few days, two doses sufficed to procure sound sleep, and to materially lessen the patient's mental perturbation. In the meantime, beef tea, with wine or porter, were administered. One grain of powdered digitalis and two of quinine were also given every 6 hours—the result being to lessen the frequency, and strengthen the pulse. At the end of a week, the medicines being, in the meantime, continued, the patient was better, though the mouth and fauces continued dry; the pupils still dilated, but responsive to light. The mental symptoms were generally improved, but were variable—being always worse after excitement of any kind, or when the repetition of the chloral was neglected.

During the second week, one-fourth of a grain of sulph. morphia was substituted for the chloral on several occasions at night. It produced quiet sleep towards morning, but did not immediately contract the pupils. Dilatation, however, was now gradually wearing off. At the end of the second week, still further improvement was manifest, although some dryness lingered on the tongue and throat—the mucous membrane of the former having begun to crack and peel off in places. Pulse about 95, stronger and less excitable; patient expressed herself with greater facility, but still substituted the wrong word occasionally; many of the old delusions still clung to her; was able to maintain rational conversation longer than during previous week; complained of deadness in the lower limbs.

Persistent hallucinations on certain subjects continuing during the third week (notwithstanding the almost complete subsidence of dryness of mouth and dilatation of pupils), the family became alarmed lest the mental aberration should become permanent. With a view of testing our diagnosis and prognosis (which was favorable as to ultimate recovery), it was determined to take a new departure in the line of therapeutics, and suspend the wine, chloral and morphia, and to give instead saline cathartics, large doses of bromide of potassium and ergot, in view of lessening the cerebral circulation. The result was a marked increase of restlessness, excitability and hallucination, with symptoms at the end of 48 hours of great prostration. It was, therefore, determined to return to the chloral in increased doses, and to the pills of quinine and digitalis, with wine, &c. Improvement in all respects was soon apparent—so much so that the patient was allowed to rise and dress herself, and in a few days was allowed to take a short drive with her family in a carriage. During the drive, she conversed rationally, being much interested in passing

objects. This little breath of fresh air and general shaking up seemed to impart a new impulse to her circulation, and rapid convalescence set in, so that at the end of another week recovery was complete, except that attention could not be long concentrated on one subject. Indeed, some time elapsed before any mathematical calculation involving the memory could be accurately accomplished. The patient is now, however, perfectly well.

The points of interest in this case are:

1st. The effect of the belladonna—producing apparent cerebral anæmia.

2d. The pronounced action of the belladonna, notwithstanding its admixture with other powerful agents.

3d. The long continued influence of the poison.

These propositions naturally raise the question of the physiological properties of belladonna, and their relation to the effects produced by certain other drugs—a subject upon which a perfect chaos of theories presents itself on every hand. Much of this confusion is the natural outgrowth of imperfect observations and reasoning from false premises; for, however useful comparative research may be in unfolding the hidden secrets of human physiology, it is evident that experiments on the lower animals are open to many fallacies as regards the effects of drugs. This is particularly the case with belladonna, since it is known that many of the inferior orders, such as birds, rabbits, goats and the like, feed upon the berries and leaves with impunity—whilst, in fact, nearly all of them evince a tolerance far superior to man—at least when the drug is administered by the stomach. It will be a proud day for our science when, by a series of observations, we shall have arrived at an accurate understanding of the physiological laws underlying the action of that class of remedies which are known to exercise a direct and powerful influence over the vital functions; and it is only by picking up a fragment here and there that we can surmount the perplexing and mortifying obstacles that so frequently stand in our way.

As regards the case just reported, I anticipate a smile of skepticism on the part of many who will read it; they will deny that there was cerebral anæmia, or that belladonna is capable of producing this effect. To such, I can offer no additional proof. The ophthalmoscope would probably have aided materially in the diagnosis of the condition of the brain, and it is regretted that it

was not employed. It should be added, however, that the preponderance of testimony from the most authoritative sources is favorable to the view that belladonna produces contraction, rather than dilatation of the capillaries. Dr. Brown-Séquard is quite emphatic on this point. He holds that belladonna and ergot are similar in their action, and prescribes them in cases of paralysis from congestion of the spinal cord, with a view to their contractile influence over its vessels. In this respect, he claims that their action is antagonistic to strychnia, which always dilates the arterioles.

Prof. J. T. Hodgen, of St. Louis, a most cool and accurate observer, has tested this question to his entire satisfaction, both clinically and experimentally. He exposed the intestines of cats until deep congestion supervened; a subcutaneous injection of atropine produced capillary contraction and paleness. He also injected atropine hypodermically in cholera collapse, with prompt, and, in some cases, wonderful results.

There is great similarity between the pathological condition in certain cases of sunstroke and opium-poisoning. The heart in each case is depressed with pulmonary engorgement and, if life be sufficiently prolonged, secondary congestion of the brain. Under such circumstances, atropine has proven of signal service, giving a fresh impulse to the circulation, and driving the current onward through its contractile action upon the blood-vessels. It is upon the power of belladonna thus to antagonize certain dangerous effects of opium and other drugs, that its claim to so-called antidotal virtue rests; at least, this is as much as the researches of Bennett, Fraser, Harley, Martindale, Ringer and others warrant us in assuming. The former, in his report to the British Medical Association, thus sums up his conclusions in regard to the antagonism between atropine and morphia. He says: "The beneficial action of sulphate of atropia after the administration of large doses of meconate of morphia, is probably due to the action sulphate of atropia exercises on the blood vessels. It causes contraction of these, and thus reduces the risk of death from cerebral or spinal congestion, as is known to occur after the introduction of fatal doses of meconate of morphia."

I might thus go on and enumerate many other evidences, both clinical and experimental, in favor of the view that belladonna contracts rather than dilates the arterioles of many of the inter-

nal viscera; but I am reminded that the object of this paper was simply to report an apparent clinical fact for what it may seem worth, rather than to offer an argument thereon—hoping thereby to contribute an humble mite to the study of a subject which offers a rich harvest to the investigator.

It is not improbable that a beneficent Providence has placed within our grasp ample weapons wherewith to successfully combat nearly every phase of disease, did we only know when and how to use them. Let us hope, therefore, that the day is not far distant when a more exact knowledge will enable the physician to *simplify* all his prescriptions, thus avoiding the expense, to say nothing of the possible injury sometimes accruing from the double-barreled, compound, complex formulæ hitherto so much in vogue.

ART. II.—*Anatomical Rooms—Plan for their Construction, Ventilation and Hygienic Management.* By H. LENOX HODGE, M. D., Demonstrator of Anatomy in the University of Pennsylvania, Philadelphia.

Much attention has been paid to the proper construction of buildings intended to be used for hospital purposes, and every care has been taken that they should be well ventilated. But up to this time, very little trouble has been taken, either at home or abroad, to secure proper ventilation for *dissecting rooms*. In the hospital ward, the atmosphere is contaminated by the emanations from the bodies of the sick, and by the discharges from the wounds. In the dissecting rooms the sources for contamination of the atmosphere are even greater. As usually arranged, the number of subjects in a dissecting room are equal, or, perhaps, greater than the number of patients in a ward. Every one of the subjects has been dead for several days or many weeks, and every one shows more or less evidences of decomposition. The air thus vitiated is breathed for hours at a time by the students, whose general health and powers of resistance to such malign influences have been weakened by long continued study, hasty meals and loss of sleep. The room is often crowded, and when only ordinarily full, there are five students to each dead body. Is it any wonder, then, that year after year

such a state of things should show their natural result in impaired health, and that the term "dissecting room diarrhœa" should be a byword among students?

Ever since I began to teach anatomy and operative surgery in Chant street, eight years ago, I have endeavored to lessen this evil in the rooms under my care. I introduced some improvements in the rooms in Chant street, and afterwards, when made Demonstrator of Anatomy, in the University of Pennsylvania, with the permission of the Board of Trustees; and still more recently, in the new building for the Medical Department, the trustees have incorporated many suggestions which will tend to increase the comfort of the student and the protection of his health.

The result of the practical experience thus gained, and the opinion formed of the various methods tested, will constitute the basis of this paper.

Location.—Should the dissecting rooms be placed in the same building as the lecture rooms, &c., or should they constitute a separate building? The answer to this question will often be determined by the amount of money which can be expended for the purpose—for it is, of course, more expensive to obtain the additional ground necessary, and to build the additional foundation, walls and roof of a separate building. The advantages of the isolated building, devoted to the single purpose of dissecting, are, however, very great. By this means, there would be a sure prevention of any contamination of the purity of the air in the lecture rooms, by any odors from the dissecting rooms. There would be no lifting of subjects from the lowest to the highest floor of a tall building, and no need, therefore, of a special apparatus for this purpose; and then, afterwards, no lifting down again of the waste material. Then, also, all the rooms for the preparation of skeletons, and specimens for the museum, &c., would be together upon the same floor—enabling the demonstrators, students and attendants all to be within easy call of each other.

The objections to a separate building, besides that of additional expense, are that, being necessarily low, it would be much more exposed to the view of persons in surrounding houses, and more easily accessible to the inspection of the curious. These objections could be obviated by selecting a position as remote as

possible from any street; and while easily reached by students, and by a horse and cart, yet it should be situated on the least frequented side of the main building, or hidden in the midst of a group of college buildings, if there be more than one, as is usual in a University. One dissecting room built upon this plan, which I visited in Europe, attempted to make it more private by having no side windows, lighting it entirely from the top. The light obtained by skylight was sufficient, but the plan was destructive of ventilation. There should always be side windows in abundance, but these, in a one-story building, should be kept constantly closed by means of outside shutters with blinds, which will render the privacy of the interior as complete as possible, and yet will allow, by turning the slats, a free ingress of air and light in addition to that obtained by the skylight.

If, on account of economy in money or in ground, it is necessary to put the dissecting rooms in the main medical building, they should be placed in the *top story*. They are then less exposed to the gaze of the curious; they can be better ventilated; they can be better lighted; and any odor which may be in the rooms can be more easily prevented from passing through the rest of the building. In King's College, London, the dissecting rooms are placed under ground in the cellar of the building, and extended under an embankment beyond the building. That part in the building can be lighted only by gas, and that under the embankment by a closed skylight. The room was, of course, dark, damp and foul; no windows and no means for the free entrance of fresh air are provided.

Not only should the dissecting room be placed in the uppermost story, but it is of importance that it should be higher than the rest of the buildings. There should be *windows on opposite sides*, of the length of the dissecting rooms, and, if possible, also at one or both of the ends, as in a hospital ward. In this way only can the air be sufficiently changed, and the room properly ventilated in summer; and as the temperature of a dissecting room ought always to be as low as is comfortable to the students, there is hardly a day, even in the winter, during which some of the windows may not be open, and advantage taken of this efficient method of ventilation. Many and large windows on all sides allow the air from every quarter to blow freely

through the rooms, and drive away bad odors and unhealthy emanations better than by any other method. In Bellevue Medical College, New York, there are no side windows, and no other apparent method of ventilation except into a skylight well, which communicates with their only lecture room. Thus, the dissecting room is ventilated into the lecture room, and the lecture room into the dissecting room! The atmosphere of the one is contaminated by the putrid odors from the dissected subjects, and the atmosphere of the other filled by the waste products given off by the lungs and skin of 400 living men.

Ventilation should be secured, not only by side windows, but also by the ridge. This method of ventilation is made far more efficient than is ordinarily obtained in our hospitals, by combining it with the skylight. The skylight should be of the form sometimes called the "box skylight." It should extend almost the whole length of the room, should rise above the roof, should have large panes of strong glass on its four sides, each pane being swung at its middle on pivots. The roof of this long, wide, high skylight may be of shingles or of tin, as the rest of the roof. Such a skylight will ventilate the room in the most perfect way, and at the same time will throw more suitable light upon the table. The ordinary skylight, with the glass set in the slope of the roof, not only does not allow of any ingress and egress of air, but also throws the direct rays of the sun upon the tables, causing great heat and glare to those busy at work, and also hastens the putrefaction of the subject, or, if thoroughly preserved by chloride of zinc, hardens it by rapid drying.

With these efficient means of ventilation by side windows and by skylight, there is but little need, even in winter, of any ventilating flues in the wall; but these may be added, and will be of service if arranged in contact with the chimneys or hot air flues on inside walls, so as to secure a current of air. In cold weather, the ventilation will be greatly improved if there are fires in open fire-places at both ends of the room, or if there are one or more stoves placed in the midst of the room.

Lighting.—During the day, the light obtained by the side windows and the skylight already described, will be all that can be desired. During the night, every table should be lighted separately by a gas fixture or by lamps suspended over it. Each

table should have two lights—one over the top of the chest of the subject, and the other over the knees. In this way, every subject will be well lighted, and yet there will be no unnecessary expense, as no lights need be lighted over any table when the class is not present.

Heating.—The room may be heated by hot air, or steam furnaces, with the rest of the building. It is better, however, to combine with these open fires than to make use of stoves, as by this means a more uniform temperature may be obtained, and at the same time that the necessary heat is obtained, the ventilation is improved by the draft of air passing through the hot coals.

Water.—The supply of water should be abundant, for the purposes of washing, and for scrubbing the floors and tables. In a few places, as in the new building of the University of Pennsylvania, the force of water in the city works is so strong as at all hours of the day to give a copious supply, even at the top of the house. In most places, however, during the day, the water will not rise as high as the upper stories of a high building. At night, however, when the large manufactories have closed their works, water may then be obtained, and it will fill any large tank which may readily be placed in the attic, and the water can be drawn at all hours of the day.

Formerly it was customary to give the students nothing in which to wash their hands but a long trough and tin basins in the room where the remnants of the subjects were collected, to have the muscles cut away from the bones, and the ligamentous and fibrous substances separated by boiling. Many of the older practitioners will recall a scene fit for a painter. The bell has rung announcing that the hour of ten has come. The students hastily close their books, and run with their instruments, and crowd into this boiling room, filled with the horrid sights and even more horrid odors, each one hurrying to seize, as soon as fortune may favor him, one of the half dozen old battered tin basins, and push, as best he may, to the solitary stop-cock in the room, and then find his way back to two or three hanging towels waiting to be used by a hundred students. Better days have come, and in well arranged dissecting rooms we now have rows of marble basins, with good soap and towels, as in a first-class hotel. No where are the best appliances for washing more ne-

cessary, as, even with the best means at one's command, it is almost impossible to properly clean the hands, and remove the disagreeable odor which remains so persistently after handling the contents of the abdominal cavity.

Dimensions of the Room.—This should depend, of course, upon the number of students who generally attend the College during the session, and the number of tables desired. Each table should be two feet wide and six feet long, and around each table there should be space enough to accommodate the class of five, which usually are assigned to a subject. This would require about four feet at the head and foot of each table, and five feet at the side, between the tables. If it be a small dissecting room, and only a single row of tables is needed, the width of the room inside should be about 16 feet. This would allow one foot for a row of private closets, four feet for passage way, six feet for the table, and then four feet for passage way on the other side, and again one foot for another row of private closets on this side. If there are to be 10 tables, then the length of the room should be 80 feet. There would thus be space enough to allow five feet from the wall to the first table, and five feet between every two tables, and ten feet between the last table, and a row of stationary washstands at the other end of the room, with two feet for the width of every table.

If, however, a greater number of tables are desired, as will be necessary for the large classes in our chief cities, then it will be advisable to increase the width as well as the length of the rooms, and thus be able to have two rows of tables. For thirty tables, the room should be 115 feet long by 30 feet wide. This would give space enough for two rows of tables, each two feet wide, with five feet between them, and ten feet between the last table and the row of washstands, and also passage ways between ends of the tables and the walls, and between the tables at their ends towards each other, and rows of private closets may be placed along the walls.

The height of the wall should be 15 feet, with either a flat ceiling, with the skylight cut through it as before described, or, what makes a very good finish, let the room be run up to the rafters, which may be cased and left exposed or ceiled with boards, but, under all circumstances, having the same ventilating skylight.

Windows,—The windows ought to be high and wide, and on all four sides of the room. They should extend to within two feet of the floor and one foot of the ceiling. They should be nine feet apart, so that every table should have a window on one side of it. In this way, we secure the freest possible circulation of air. As these windows are very high, it is well to have an upper and lower sash, and a swinging transom above.

The above are the chief characteristics of the main dissecting hall, but all the ventilation possible will be of no avail without the strictest attention to cleanliness, the preparation of the subjects, their removal as soon as possible after decomposition shows itself, and the burying or burning of the waste. Everything should be done in the right time, and in the right way. There should be a place for everything, and everything should be in its place. These old-fashioned rules are nowhere of more importance than in the anatomical rooms, and nowhere have they been more grossly neglected. At this day it will require more than a Hercules to cleanse these worse than Augean stables.

In order that everything should be conducted properly, there should be, in addition to the main dissecting hall, at least two other rooms—one for the reception and preparation of the material, and one for the disposition of the remains, the boiling of bones, the preparation of skeletons and anatomical and pathological specimens, and the cremation of such parts as are not wanted, if that plan be adopted.

Preparation of Material.—The room for the reception of the subject, and its preparation for the dissecting table, should be situated, in all cases, on the ground floor, and so arranged, if possible, that a horse and wagon can be driven into it or into a vestibule connected with it, and the doors closed while the dead are taken from the wagon and deposited in the room. If this precaution should not be taken there will be an unnecessary exposure to the gaze of the curious, or even to the passer-by of what is naturally revolting to the sight of every one, and at times it may be the cause of more or less public comment, excitement or even assault and riot.

As soon as possible after reception, the subject should be injected with some preservative material. There is nothing that has, as yet, proved so good a preservative as chloride of zinc.

Yet, as it hardens and bleaches the tissues, it is often objectionable. Arsenic is still a favorite in the dissecting room, because it allows the color and softness of the tissues to remain as they naturally are. It is, however, by no means as good a preservative as the chloride of zinc. This objection, however, is of less importance during winter than in the warmer weather, and it is in the winter that the greatest amount of dissection is done. If it should be desirable to keep an arsenic subject for a length of time, or a part already carefully dissected, for class demonstration, I would most earnestly recommend the employment of ice. Ice has been for a long time employed with great success by the undertakers in their care of the corpse, and every year its use is on the increase in the preservation of meats for use at sea, and in bringing delicate fruits, as well as meats, from places where produced or slaughtered to even very distant markets; and yet its great value in the anatomical room has not been appreciated or hardly thought of. There is nothing that I have tried which equals it. It is not merely cold that is needed. There should be freedom from dampness as much as possible. The temperature should not be so low as to freeze the tissue, and above all things it should be as uniform as is possible. The hydrate of chloral recommended by my friend, Dr. Keen, has not proved satisfactory in my hands. The odor is disagreeable, the tissues are soft, and even early in spring while the weather was still cool, the power of preservation in the cases in which I tried it was less than that of arsenic.

In this room there should, of course, be a stop-cock, from which water may be drawn, and the floor had better be paved with flagstones and properly drained. There should also be gas, not only for light at night, but also for a gas stove, which, for a temporary fire for heating water on the instant, is superior to any other.

Elevator.—As this room is on the lowest story, and the dissecting hall in the highest, it is necessary to make use of means for raising the subjects to their proper places. The old way was by means of a rope and pulley. It is much preferable to make use of an elevator such as is employed in stores, private houses, &c. It consists of a platform properly balanced by weights and moved by ropes and pulleys. The platform should be 6 feet 6 inches long, by 4 feet wide. Upon such a platform a number of

subjects may be piled and raised at once, or a subject already dissected for class demonstration may be placed on a table with castors, and carried to the floor on which the lecture-room opens, and rolled to its place in the amphitheatre without the disarrangement of any of its parts.

Disposition of the Remains.—As soon as the class is finished with a subject, or as soon as the state of decomposition demands it, the remains of the subject should be removed to a room adjoining the main dissecting hall. In this room, besides tables, chairs, water and gas, there should be at least one furnace with a large boiler attached, and a turning lathe with necessary tools, and vats with alcohol and other chemicals. Here should be done all the work demanded for the preparation and mounting of specimens for the museum, or to meet the demands of students, physicians, or of medical or scientific institutions which have not been able to supply their own museums.

After making use of everything that is of value, the waste should be carefully and frequently gathered—once every day is none too often—so that it shall be no longer offensive to the eye or to the nose, or injurious to the health of the teachers, students or attendants. In the University of Pennsylvania, it was formerly the custom to throw this waste into 10 large vaults in the ground under the cellar. One was opened and used each year, and with the waste of the dissecting rooms, lime was thrown down. At the end of the session the opening was securely closed, and allowed to remain so until its turn came around again in 10 years, when it could be used again. Of late years, however, the quantity of material thrown in, not only from the dissecting room, but also from the operating room, has been so great, and the tissues have been so thoroughly preserved by the chloride of zinc since it has been in use, that even after the 10 years have elapsed, the vaults, when opened, have been found full. In consequence of this, for the last few years the waste has been carted away and buried. This answers a good purpose, but necessitates the keeping of the decomposing waste until it accumulates in sufficient quantities to warrant the expense of removal, the providing of horse, wagon and men for its removal, and the obtaining of a suitable place for burial. Although I have not yet been able to test it, I am of the opinion that the

best method for the disposal of this waste would be by burning. Whatever objections may be raised to the process of cremation for the dead generally, they are almost utterly void as applied to the waste of the dissecting room. If a proper furnace be provided, all parts not wanted for further use may be gathered day by day by the ordinary attendant in the rooms and at once consumed to ashes with the least possible offence or injury to the sensibilities or health of any one.

Having thus sketched the plan of what I have found by careful examination and experience to be the best for the construction, ventilation and hygienic management of anatomical rooms, I would most earnestly urge upon all who have charge of such rooms, or who are about to build new rooms for such purposes, that they carefully consider the importance of this subject. It has been greatly neglected, while much progress has been made in the practical application of hygienic rules to buildings for other purposes. It is time that our dissecting rooms should be well ventilated and as free as possible of all that is injurious to health. I know that in any one place it may be impossible to obtain all that I have described; yet if we obtain only a part, just so much will be a clear and positive gain. Even those who cannot rebuild can at least alter and improve their present rooms, or select others, even in the same building, which can be ventilated better. If any one acquainted with the rules of hygiene will take the trouble to visit the dissecting rooms connected with the great Medical Colleges, he will find that these rules have been violated in almost every particular, and it would seem to him that those who built them had modeled them on those caves and dens in which the early anatomists found it necessary to pursue their studies, before civilization countenanced, and laws protected, this important study of the human frame. May the day soon come when the pure air of heaven may freely circulate in these places where the living and the dead are so closely congregated!

Antipruritic Remedy.—Dr. L. Duncan Bulkley's prescription is ℞. Pulv. gum. camphor., Chloral hydrat., $\overline{aa}$ ℥j, Ung. aquæ rosæ, ℥j. M. Rub the camphor and chloral carefully together till fluid; then add slowly to the ointment, mixing well. Apply to the part affected, *but not to be used if the skin is at all broken.*

ART. III.—*The Analogy between Early Abortion and Dysmenorrhœa.* By W. D. HAGGARD, M. D., Nashville, Tennessee. (Read before the Nashville Medical Society, June 3, 1875.)

I propose, as the basis for the reflections I shall offer on this occasion, the subject of abortions occurring at, or previous to, the 12th week of uterine gestation. In so doing, it will, as I conceive, be necessary to point out the close analogy existing between the symptoms and pathology of early abortions, and those of dysmenorrhœa. In calling attention to this subject, I am fully aware that the field is a broad and comprehensive one, and one, too, which is involved in no inconsiderable amount of obscurity; but if I shall succeed in engaging your attention to such an extent as to impress you with the importance of the subject, and thereby elicit a full discussion of the points which it shall be my aim to elucidate, by those whose large experience and superior ability as practitioners and observers entitle their opinions to weight and authority, I shall feel amply rewarded for my effort. I will have succeeded in calling the attention of the profession, at least, to a matter of daily, if not hourly occurrence, and one, too, which, in my humble judgment, has never received that degree of attention, either by the profession or those who are the subjects of it, that its great importance, both to society and to the female sex, demands.

Abortions, occurring whenever and under whatever circumstances they may, are untoward events, and constitute an important factor in the history of many of the diseases to which females are liable. Whether we consider an abortion as the result of accident or design, we should ever bear in mind that a human being has been sacrificed—a circumstance of the gravest moment, both in a national and moral point of view, and one that has not always been sufficiently estimated, either by the patient or her medical attendant. In view of the daily increasing crime of producing miscarriages by professional abortionists, especially in the larger cities, and those which come under the observation of the regular practitioner, together with, as I believe, by far the greater number that occur daily, without claiming even a passing notice, either by the patient or her medical attendant, under the guise of dysmenorrhœa, we have, as I verily

believe, a more fruitful source of female ailments than any or all other causes combined.

Before proceeding further, I may as well state that I do not propose an exhaustive essay on the subject of abortion, but shall confine my remarks more especially to the maternal causes of abortion, believing that when it occurs in the early weeks of pregnancy, the fault will be found to exist, in by far the largest proportion of cases, with the mother.

With the etiology, symptoms and treatment of abortion, I take it for granted you are all more or less familiar, especially when occurring during the latter stages of gestation. But, unfortunately, the literature of our profession is replete with facts which show how little we know of *early* abortions, and how liable we are to confound, especially those which occur as early as the 4th or 6th week, with menorrhagia or dysmenorrhœa. To illustrate this point, I beg leave to introduce the following quotation from the work of Prof. Hugh L. Hodge, page 465. In treating of the diagnosis of abortions, he says:

"This must necessarily be very uncertain in all cases within the first four months of gestation. This uncertainty arises from the difficulty of determining positively the existence of pregnancy in its early stages. Hence, when pain or bloody discharges occur, it is difficult to determine whether it be menstruation or threatened miscarriage." Again, the same author says: "It has sometimes occurred that the first symptom which excites suspicion of a miscarriage is the appearance of the embryo—the sac having ruptured without much pain or hemorrhage, and its contents expelled—the patient regarding the attack as one of menstruation, or simple flooding."

Again, we may suppose a miscarriage to take place at a still earlier period of gestation; the medical adviser is summoned on account of pain and hemorrhage, which have occurred month after month until the woman seeks relief; or her physician has probably been summoned on account of a membranous substance found in the uterine discharges, which represents an entire membranous cast of the womb, and the affection is pronounced one of membranous dysmenorrhœa, whereas it was really a case of abortion, and the membranes extruded were the decidua of the embryo. To show the close analogy existing between those membranes, I will be pardoned for introducing the following

quotation from the admirable work of Dr. T. Gaillard Thomas, in his article on *Membranous Dysmenorrhœa*, page 587:

"Under the microscope, the cast is found to consist of the lining membrane of the uterus, hypertrophied in all its elements, almost exactly as it is in pregnancy. Indeed, as I shall soon show, the most skillful microscopist cannot distinguish one from the other." On page 589, he says: "By some, the membrane is regarded as due to a deciduous formation excited by conception, which has just been established, or is ovular in its character."

The first of these views is entertained by Hausman, and admitted in some cases by Rokitansky; and the second was advanced by Raciborsky. It will be thus readily perceived that the unsettled state of medical opinion, in regard to both the etiology and pathology of membranes formed within the cavity of the uterine organ justify the statement that the differential diagnosis between early abortions and dysmenorrhœa is exceedingly difficult, and often-times impossible, even under the most favorable circumstances. This we can readily appreciate, when we consider how exceedingly painful the catamenial periods are with some females; while, on the other hand, the ovum is represented as sometimes slipping out, and escaping from the uterus almost imperceptibly. Amid all the difficulties which confront us in making up an opinion on the abstruse questions of the etiology and pathology of the deciduous membrane of pregnancy, and the membranous formations in dysmenorrhœa, and especially when we consider the identity of formation and structure, as revealed by the microscope, we have no alternative left us, in the present state of our knowledge, but to reason by analogy.

In reasoning thus, I beg you to remember the following important facts, all of which are well established and conceded: *First*, the great tendency of abortions to occur about the time that the catamenial period would have recurred had not conception have taken place. *Secondly*, the great tendency to the recurrence in successive pregnancies of abortions at about the same stage of uterine gestation. *Thirdly*, that a woman, otherwise in good health, may be the subject of painful menstruation, and yet possess aphrodisiac sensibility and erotic desire, which always exists in a more eminent degree just after the cessation

of the catamenia than at any other period of her lunar month. *Finally*, that fecundation and conception are more likely to occur just after the cessation of the catamenia than at any other period.

I take it for granted these propositions will all be conceded. If so, then, I think, reasoning from analogy, a strong presumptive evidence is afforded, that in married women who are in the enjoyment of good health, with the notable exception of painful menstruation, so called and so treated, they are really oftentimes the subjects of repeated conceptions and abortions without either the patient or her medical adviser suspecting that she has anything but dysmenorrhœa.

Another point on which there seems to be a singular unanimity of opinion, among all the authorities to which I have referred, is, that abortions are more likely to occur, and do occur, more frequently about the third month of utero-gestation than at any other period of pregnancy. But viewing the processes of menstruation, ovulation, fecundation and conception from my standpoint, this must be an error. I hold that if copulation takes place soon after the cessation of the catamenial period; if the flow has been in due amount—no matter whether it be the result of an abortion or the extrusion of a dysmenorrhœal membrane, or of an ordinary menstrual period, whether it be attended with pain or not—if the woman be otherwise in medium health, and be not suckling a child at the time, her organs of generation are in a condition most highly conducive to fecundation and conception. And although fecundation may, and doubtless often does, take place without conception following, I believe, as a rule, that both occur; and that if the process of gestation be not suddenly terminated by abortion or miscarriage, a child will be born as the result of an impregnated ovum, following the act of copulation soon after menstruation. If the embryo should be extruded from the womb at the first recurring menstrual period after conception, as the result of habit, accident or design, I see no reason why, after the lapse of a very few days, the woman is not prepared to go through the same process of copulation, fecundation and conception, to be followed, as before, by an abortion at the next catamenial period.

But perhaps some one is ready to say that so soon as conception takes place, menstruation, as a rule, ceases to recur until

the womb has gotten rid of the contained fœtus, and that, as a rule, a woman does not again conceive until after the establishment of the menstrual function. Grant it; but please remember that we have high authority for saying that a woman ovulates uninterruptedly from birth, until her child-bearing period expires. If this be true, as I believe, a Graaffian vesicle, with its contained ovule, forms, and is cast off by the ovaria every 28 days. If an embryo of four weeks is expelled from the womb, at the end of the first lunar month another ovule is in readiness, and only awaits the life giving power of the male germ to become impregnated, which must then take its chances to become fixed in the womb in its passage, constituting conception, which, in turn, must take the chances of being extruded at the next returning period; and thus the poor woman passes through life unhappy, disappointed and humiliated, laboring under the stigma of sterility, when, in reality, she has perhaps been the subject of 20 conceptions to 1 of her more fruitful neighbor, who has been the recipient of the goal of woman's ambition, in the bestowal of offspring.

The maternal causes of abortion are frequently dependent upon organic and nervous irritation of the uterus, resulting in the contractile efforts of its muscular fibres, which increase in force and frequency until the ovum is expelled, just as the fœtus is expelled at full term, or as a dysmenorrhœal membrane is forced out of the womb at the menstrual period.

In my humble opinion, organic and nervous irritability are the most important factors in the production of abortions. Next to this, I regard the force of habit as exerting the most powerful influence—as many as 13 successive abortions being mentioned by Dr. Young, of Edinburgh, while Dr. Shultz mentions a case in which 22 successive abortions occurred in the same individual at about the same period of gestation. As much stress as has been laid on this latter cause, I do not believe it has been sufficiently appreciated as an active agent in the production of abortions. If we combine these two efficient agents, as they always are, we have sufficient grounds upon which to base the opinion that just as certainly as effect follows cause, so does abortion follow conception, until the cause (organic or nervous irritability) is removed by proper treatment. We should ever bear in mind that

the object and aim of the marriage relation is procreation—the perpetuation of the race; and whenever the parties to a marriage alliance fail in this legitimate and laudable design, chagrin, mortification and discontent are the inevitable consequences. Hence it is the duty of the medical fraternity to secure offspring to the marriage bed through the agency of skill; and a knowledge of the procreative powers of the individual, whenever it is practicable, becomes imperative. This much is due to those who honor us with their confidence; it is due to our profession, our country and our God, whose instruments we are, in all that pertains to the amelioration of the deviations from the laws of nature.

All women are not equally liable to abort. Those found in the humbler walks of life, who are addicted to daily labor and hardships, though they are much more exposed to the accidental causes of miscarriage, are yet found to enjoy a much greater immunity than those who live in the cradle of ease, luxury and indolence; for these latter conditions cause a high degree of nervous excitability of the uterine system, which, as soon as the habit of aborting is established, will not, without the aid of therapeutics, tolerate the presence of a fœtus beyond the period at which abortions have occurred on former occasions.

I think the facts and arguments adduced prove most conclusively that abortions, instead of occurring most frequently at the third month of gestation, do, in point of fact, occur more frequently at the close of the first lunar month, or at the approach of the first menstruation after conception—in my opinion, in the proportion of at least three to one; and that the liability to abort diminishes in a direct ratio from the close of the first lunar month after conception, until the expiration of each month during the entire period of gestation.

Whenever a given theory in any department of science is generally received and adopted as correct, however far it may fall short of the truth, it is too apt to pass as an established fact, and thus acts as a barrier to further investigations in that direction. So it has been with regard to the generally received opinion that abortions occur most frequently at the third month, and statistics are not wanting which *apparently* sustain the opinion. The trouble has been that abortions as early as the 6th week in 99 cases out of 100, have not been recognized as such, owing to the

fact that cases occurring at so early a period do not often come under the notice of physicians; while, on the other hand, they are generally called in when abortions occur or are threatening at a later stage of gestation. This statement accounts for the reported statistics, which, as I have just said, though true it may be, as to fact, are nevertheless false as to the respective periods at which abortions most frequently occur—the natural results of which false statistics are daily errors in practice. When we couple this with the additional fact, that the profession, as a whole, has adopted this view, strengthened by *usually accepted statistical tables*, until the laity, as well as the profession, have come to regard nothing short of a fœtus so large as to attract the notice of the most casual observer as an abortion—I say it is not strange that anything short of this is generally attributed to an abnormal condition of the catamenia—no matter how much pain or hemorrhage may occur. I venture the assertion that there is scarcely a practitioner of any considerable experience who has not known married women, who have been perfect models in symmetry of form, in grace, beauty, and elegance, whose general appearance was that of health and who have enjoyed all the blessings and comforts of social and marital relations, with husbands too, in every respect their equals, and yet whose hopes of offspring have been deferred month after month, and year after year, until the hearts have sunk in deep despair at not having fulfilled the mission of woman on earth. Now who knows but that some of these wives, at least, were in reality in possession of their procreative function, although the fruits of successive conceptions were, by reason of intollerance of the uterus to the presence of an embryo beyond a given time, regularly cast off, and perished, while yet the couple lived in ignorance of their ability, and in miserable discontent on account of that ignorance? It is my fixed opinion, that just so long as women of this class are treated alone for the various forms of disordered *menstruation*, without regard to the actual pathological changes induced by organic nervous irritability—in many cases caused by repeated abortions—just so long will the profession fail to recognize the therapeutical indications in such cases, and just so long will the efforts of nature fail to fulfil its mission, by sustaining the stream that enters life, to supply the never-failing tide departing.

As illustrative of the points I have endeavored to elucidate in this paper, I desire to give a resumé of some cases that occurred in my practice several years ago.

Case I.—Mrs.——of Gallatin, Tenn., a most charming lady, the wife of a leading merchant of that day, who had been under the treatment of some of the most eminent physicians of that town and vicinity during her married life, embracing a period of some six or seven years, for dysmenorrhœa, as they termed her disease. Although at the time a very young practitioner, the case fell into my hands, with the hope that relief would be obtained from the excessive pain which attended each recurring monthly period, and that her nuptial bed would be blessed with offspring, which she and her husband both very much desired. After instituting the most rigid and searching inquiry into the history and symptoms, I availed myself of the use of the speculum. I was amazed to find that the uterus gave evidence of so little disease, I found no displacements, no ulceration, no induration; the only condition which attracted my attention was the os itself, which had the appearance of slight congestion, with the opening slightly larger than one would expect to find in a woman who had never been pregnant, in which condition the lady declared she never had been to her knowledge. The general appearance of the lady as to health, was perfect; she was full of energy and vivacity; fond of fashionable society, and dress; was exceedingly nervous and impressible; her general make up was such as would impress one with the belief, that she could scarcely fail to conceive under favorable circumstances. At the first monthly period after I was consulted, I was summoned in obedience to my request, and found the patient suffering with the most inordinate pain coming on at intervals, simulating very closely expulsive uterine pains. These facts arrested my attention. After giving the case the best thought I was capable of bestowing, I became satisfied that my patient had been the subject of repeated conceptions and abortions, and that the slight congestion I had noticed about the os uteri was the result of organic nervous irritation. As her husband was making preparations for a business trip East, I thought it a most opportune time to secure that perfect state of quiescence of her uterine system, which I deemed important to the success of the treatment upon which I had determined to place her, which consisted in a cold shower bath every morning, to be followed by thoroughly rubbing the skin with a coarse crash towel, until the skin got into a perfect glow. I ordered perfect rest in the recumbent position, the most perfect quietude of mind and body, with a

gentle laxative to keep her bowels soluble, together with nervous sedatives and tonics, with opium enough to keep her slightly un ter its influence all the time, to allay irritability and excitement. At the approach of her expected monthly period, I ordered an injection of 60 drops of laudanum night and morning, with a perceptible increase of the opiates internally; I also placed upon the inner side of each thigh a small blister to act as a revulsive agent from the womb. In this state of perfect calmness, she passed her catamenial period without any return of the abortive symptoms. Under this treatment the case progressed well for the next five months—observing a little more strictness in the employment of the agents about the time of each catamenial period, which would no doubt have been attended by menstrual discharge, had not the woman proved to be pregnant. I watched this case with unusual interest, through her pregnancy, and finally delivered her of a fine, healthy boy at the proper time, since which she has raised quite a family of children.

Case. II.—A lady from the South, of wealth and position, who passed her summers with relatives in Sumner County. She was the mother of two children, the eldest a most charming little girl of about 12 years of age. but of very delicate habit and the subject of scrofula attended with coxalgia; the second was an imbecile boy of about 10 years of age. Since the birth of this boy the lady had never enjoyed good health, on account of inordinate pain at her monthly periods, attended generally with considerable hemorrhage. As the girl did not give much promise of living to the age of womanhood, and the boy was nothing but a charge upon the parents, it left them with a prospect of going down to their graves in sorrow, leaving no one to inherit their vast possessions or perpetuate their family name. When I was called to this lady, I was forcibly impressed with her rare beauty, her fine accomplishments, and her exceedingly modest and impressible nature. She informed me that she had been under the treatment of some of the most noted physicians of which our profession could boast; she had been recommended to visit the sea shore, and had been to most of the celebrated watering places. But despite all this and the treatment of her physicians, she still suffered with what had been invariably termed an aggravated case of dysmenorrhœa. After a thorough investigation by the speculum and uterine sound, I was prepared to say that the only deviation from a healthy uterus that I could discover was a pale, flaccid condition of the organ, which I attributed to the general anemia present in her case. As she was extremely nervous, I thought it fair to presume that her uterus partook of the same nervous irritability that pervaded the rest of her system.

Upon inquiry, she stated she had never had a miscarriage to her knowledge. I inquired if she had never had her attention called to the symptoms usually accompanying pregnancy, to which she replied she had several times been induced to hope that she might possibly be pregnant from some symptoms simulating very closely those attending her former pregnancies; but as a few weeks always sufficed to re-establish her monthly periods, she passed the matter over without further thought. This case had already elicited the most thorough investigation, and the best solution I could give of her case was that she had often been pregnant, the embryo passing off at an early period of embryonic life. This being my diagnosis, I deemed it of the greatest moment to place her uterine system in the most perfect state of quiescence I could secure. My treatment consisted in cold shower bath every morning, with the exhibition of iron and quinine as tonics and blood maker, requiring my patient to observe the recumbent position as far as possible. I also gave valerianate of zinc as a nerve sedative and tonic; also ordered the full exhibition of opium at the approach of her next catamenia, which secured her against the inordinate pains she had formerly experienced. About this time her husband was called South on business of importance connected with his estate. This gave me an opportunity to secure what I had not done before, perfect freedom from sexual indulgence, which, by the way, cannot be too much insisted upon as a great auxilliary in the treatment of cases accustomed to abort. I urged the importance of the strictest punctuality in carrying out the directions, which I believe was done. As the next catamenia approached, I ordered injections of 60 drops of laudanum night and morning, with absolute rest in the most quiet and secluded room about the house. This period was passed without any appearance of the flow or pain. The treatment was kept up for some six months, but with less punctiliousness towards the last, at which time she returned to her Southern home. I afterwards learned that she gave birth to a healthy, living child, as the result of this treatment.

Case. III.—A stout young muscular woman had been married some three years at the inception of the late war. The couple had lived with the husband's father and mother ever since their marriage, the old gentleman being a well-to-do farmer, who resided near Gallatin. The young husband was a favorite son, especially of his mother, and as he had enlisted as a soldier in the Confederate army, great was the regret that there was no little Elmore, for such was his name, to remind the loved ones at home of the dear son and husband who was soon to leave them, perhaps forever, in defence of his country. I had been the fami-

ly physician of the old gentleman for some years, and had occasionally had my attention called to the young wife; but, as is too often done, contented myself with some prescription without fully investigating the case, until the crisis came when the husband was about to leave without a child to perpetuate his name. I determined to investigate the case in obedience to the urgent solicitation of the old mother. I found the lady much above the average in point of physical development, and was the picture of health, complaining of no inconvenience except that her monthly periods had been excessively painful ever since her marriage. She enjoyed perfect amenity from pain at such times before marriage. Seeing such perfect health, I concluded she had been having abortions at each successive recurrence of the monthly sickness. Upon enquiry, I found her periods were expected in a few days, and knowing that her husband was to leave with his regiment a few days afterwards for West Virginia, I availed myself of the opportunity to place her fully under such restrictions as I thought best calculated to secure the end in view. Under the plea of allaying the excitement arising out of the departure of her husband, I placed her under the influence of narcotics and nervous sedatives, prohibited her from leaving her room, and required her to observe the recumbent position. She was kept under these imperative restrictions until after the period for her catamenia had passed, which fortunately did not come on. Three or four days before the expected return of menstruation, I ordered 60 drops of laudanum, with two tablespoonfuls of starch water injected into the rectum night and morning; also a small blister on the inner side of each thigh. Having safely passed one period, I thought the tendency to abort would diminish with each returning month, but deemed it important to observe such precautionary measures as have been indicated. All my instructions were strictly complied with, and, as the sequel proved, with the happiest results—as I delivered her of a child in due course of time, which his father was proud to see at the close of the war.

I cannot close this paper without touching briefly upon the treatment of abortions as we find them in every day practice. On being called to a case threatened with abortion, my invariable rule of practice is first to ascertain as nearly as possible the stage of the pregnancy, frequency and the extent of the pains, the amount of hemorrhage, the cause, if known, that has induced the symptoms present—whether they be habitual, or accidental, immediately predisposing or exciting. Having elicited all the

information I can from the patient or her friends, I then institute an examination per vaginam. If I find the os uteri dilated and flaccid, with expulsive pain at the menstrual periods, whether attended with hemorrhage or not—if the os be dilated to any considerable size, I regard the case as of doubtful character and make my prognosis accordingly. But if I find the os uteri firm and undilated, even if I find hemorrhage attended with severe pain I regard the case more favorably; and if the other symptoms warrant the belief that the fœtus be living, I make the effort to save the conception. I endeavor to bring my patient as speedily under the influence of opium as possible. Having done this, I endeavor to keep her under the influence of the drug as long as any symptoms remain of pain or hemorrhage—experience having taught me that many cases may be carried to a favorable termination that under a more temporizing treatment would result in miscarriage. I am thoroughly convinced that many cases of abortion are caused by nervous irritability of the uterus, resulting in an intolerance to the presence of the fœtus in the womb; hence nature endeavors to rid the organ of its contents by expulsive efforts. If this irritability be overcome by the free and full administration of sedatives and narcotics, the pregnancy may oftentimes be saved.

I do not think authorities have laid stress enough on the importance of thorough investigations in such cases as I have spoken of, to enable the practitioner to make a clear diagnosis. Neither do I think they attach sufficient importance to the wonderful powers of opium, administered with the view of procuring its full effect. In my hands, it has seldom disappointed my expectations.

Dr. Tyler Smith contends that the process of ovulation exists during pregnancy, periodically as in the unimpregnated state. (See Dr. Hodge's *System of Obstetrics*, page 117). Bischoff and Barry agree that the development of the Graafian vesicles and ova continues uninterruptedly from birth to the end of the fruitful period of woman's life. (See Kirke's *Manual of Physiology*, page 490). Again, on page 492, he says, "from the earliest infancy and through the whole fruitful period of life, there appears to be a constant formation, development and maturation of Graafian vesicles with their contained ova."

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ART. IV.—*Retro-Uterine Hœmatocele—A Gynœcological Study.* By GEORGE T. HARRISON, M. A., M. D., Assistant Surgeon to the Woman's Hospital of the State of New York, New York City.

An apology would seem appropriate, on first thought, for obtruding upon the notice of the profession a theme which many may deem exhausted, illustrated as it has been by the published observations of so many eminent gynæcologists during the past twenty-five years. Attentive perusal, however, of the extensive literature of the subject, will soon show that hardly any affection embraced within the domain of gynæcology can be adduced in regard to which such diversity of opinion exists among sysmatic writers and clinical observers as obtains with reference to this. The seat of the disease, its frequency, its significance, its etiology and pathogenesis have each and all been the subject of animated discussion and have called forth the most opposite views. To attain to some measure of unanimity upon these contested points, we need not so much ingenious and plausible explanations of the phenomena the affection presents during life, as rather accurate investigation of the seat of the disease in the corpse. The pathological anatomist must give us the clue to guide us out of the labyrinth of doubt and perplexity in which we are now involved by conflicting statements and incompatible views.

From this stand-point, it is unfortunate that hæmatocele so rarely becomes the subject of *post mortem* investigation, as the usual termination, under the present expectant mode of treatment, is favorable. Under these circumstances, in attempting to grapple with the difficulties that beset the subject without bias or prepossession in favor of any one theory, let us study the clinical phenomena of the disease with the utmost exactness, and, invoking all the aid that normal and pathological anatomy can render us, endeavor, if may be, to find an elucidation of the facts. As preparatory to this critical analysis, it may be useful to call to mind the clinical picture usually exhibited. and to this end I give the notes of a case occurring in my practice.

August 15, 1872.—Summoned to the bedside of Mrs. W. who had been taken suddenly very ill the day before. The most essential points of her history briefly summed up are as follows: Is 32

years of age; has been married about ten years, but is sterile; general health quite good; appetite and digestive functions, as a rule, give no cause for complaint. Has suffered, however, for years from dysmenorrhœa—of late the pain being more intense. Menstruation appeared first about the age of 14; has recurred regularly since it was first established, except that recently it has recurred too frequently and has been too profuse. Several years ago, consulted an eminent physician in London on account of the painful menstruation, but derived no benefit from his advice. A week or more ago, was advised to consult a female practitioner. A few days after visiting the latter she called to consult me: says she has not felt well since she was examined by the female doctor, complaining that the introduction of an instrument into the womb caused great pain, and was followed by a discharge of blood, and that since, she has suffered with more or less pain in the inferior part of the abdomen. I therefore did not make use of the sound, but contented myself with a vaginal exploration and the exercise of bimanual palpation or the combined examination. Found the uterus decidedly anteflexed, and the anterior part of the body the seat of an interstitial fibroid tumor, which doubtless caused, or at any rate increased the anteflexion, and at the same time was an important factor in the production of the dysmenorrhœa.

A day or two after my examination the patient states that the period came on very profusely, that she soon became very sick and faint and was forced to take to bed. I was called the day after the seizure and found the following condition: Patient has an anxious expression of countenance, is pale, and the lips are cyanotic. The respiration somewhat accelerated, pulse small and frequent, 120—temperature 100° F. Complains of thirst, nausea; has had some emesis, a feeling of debility, sensation of bearing down, a sensation as if a large body were in the pelvis; defecation attended with pain and difficulty. Examination per vaginam shows that the uterus is displaced forwards, the portio vaginalis being close behind the symphysis pubis and deep in the pelvis, the os uteri pointing forwards, while immediately behind the portio vaginalis is perceived a tumor of an elastic doughy consistence, which depresses, to a considerable degree, the posterior part of the fornix vaginæ. By the combined examination, the body of the uterus is perceived just behind the symphysis, and is moved with difficulty, the tumor being evidently behind and distinct from the uterus. The latter investigation is attended with pain and must be practised with great caution. Rectal exploration reveals the fact that the rectum is largely encroached upon by a tumor of a somewhat globular outline, which evidently

occupies Douglas' *cul-de-sac* as the plicæ semilunares Douglasii; are plainly recognizable by the touch.

Such is the group of symptoms which the clinical observer finds in an ordinary case of pelvic hæmatocele varying of course in minor points of detail to a greater or less degree in the individual case. On analysis, we find these symptoms* are composed of menstrual disorders (existing in the case cited and in a large proportion of cases, but not a *conditio sine qua non*, as they are sometimes absent), of symptoms of acute anæmia, and of symptoms arising from the sudden development of a tumor in the pelvis—these latter being either referable to the organs situated in the pelvis, or consisting of nervous and reflex phenomena. Our problem will be brought nearer a solution if we now hastily review and subject to a critical examination the different opinions which have been advanced from time to time by various explorers in this field to explain these symptoms and to elucidate the nature of the affection.

It is certainly remarkable that a disease so marked in its clinical features should not have been recognized until so recently—for its history only dates from the investigations of Nélaton, who may properly be termed its discoverer. Voisin,† indeed, maintains that a knowledge of hæmatocele is as old as the time of Hippocrates, but the evidence on which he relies for his statement is utterly insufficient. So, too, the opinion of Bernutz,‡ that Ruysch,§ of Amsterdam, had a knowledge of hæmatocele, can no more be justified by an appeal to the historical facts than his own claims to priority of discovery. And while it is true that Récamier‖ describes a tumor in the pelvis which contained blood, and while similar observations were made by Ollivier,¶ Laugier,** Bernutz,†† Bourdon,‡‡ Velpeau§§ and others, it is also true that a full recognition of these facts does not

Vide Olshausen—Ueber Hæmat: u. Hæmatometra, Archiv. für Gynœkol., Bd. i, s. 29.

† *De l'hématocele Retro-Uterine et des Epanchements Sanguins non enkystes de la Cavité Péritonéale du petit Bassin, &c.*, Paris, 1858.

‡ *Clinical Memoirs*, Lond., 1866.

§ *Observ. Anatomico-chirurg. Centuria*, Obs., lxxxv, 1691.

‖ *Lancette Francaise*, 1831.

¶ *Archive Gen. de Med.*, Paris, 1831.

** *Dict. de Med.*, Tome v.

†† *Archive Gen. de Med.*, 1848.

‡‡ *Tumeurs Fluctuants du petit Bassin, Rev. Med.*

§§ *Med. Observations.*

invalidate the statement that Nélaton is properly the discoverer of pelvic hæmatocele, as to him is due, indisputably, the credit of having first given an accurate clinical description of the affection, and having first appreciated correctly its claims to be considered a distinct form of disease. He enunciated his views partly through the medium of his pupils (Vigues,* Gaillet and Bouchet , partly by his own lectures.† Observing that the disease appeared in connection with menstruation, he termed it hæmatocele retro-uterina catamenialis. His theory was that the blood originated from a Graafian follicle ; owing to some abnormal condition of congestion, blood was poured out from that source, collected in the most dependent part of the peritoneal cavity *i. e.* Douglas' *cul-de-sac* ; and, coagulating there, formed the retro-uterine tumor. While he regarded the seat of the disease as always intra-peritoneal, Vigués, on the other hand, for a long time considered that it was always sub-peritoneal. Puech‡ observed that the exercise of coitus during menstruation could give rise to hæmatocele—nay, that even very strong sexual excitation could be followed by the same result. Gallard§ developed the theory that the hemorrhage might originate from an ovum having an extra-uterine seat. If, for example, the Fallopian tube in which the ovum was seated should burst at an early period of pregnancy, the hemorrhage would be limited in extent, and would not terminate fatally, but would only give origin to a hæmatocele. He considered that his theory derived support from the circumstance that menstruation had been absent several times prior to the development of the hæmetocele, or at any rate had been irregular. Bernutz advanced a theory called by Aran *la théorie du reflux.* According to this author, the lumen of the cervico-uterine canal can in fact be closed by an obstacle depending on the contractility of the uterus ; the blood then accumulates in the cavity of the body, and, after having dilated it, makes its way into the Fallopian tubes to pour itself into the peritoneal cavity.

* *Des Tumeurs Sanguins de l' Excavation Pelvienne chez la Femme—Thèse de Paris.*

† *Gazette des Hôpitaux*, 1851 ; *Id.*, 1852.

‡ *De l' Hématocele Péri-utérine et des Sources.* Montpelier, 1858. *De l' Hemat. Peri-ut.*. Paris, 1861.

§ *Gazette Hebdom*, 1858. *Archives de Médicine*, 1860. *Lecons cliniques sur les Maladies des Femmes*, Paris, 1873.

The theory which makes the hæmatocele dependent upon the existence of a peritonitis hæmorrhagica, demands careful attention from the prominence given to it by Virchow in the pathogenesis. Though several French authors, MM. Beau, Huguier, Tardieu, Dolbeau, spoke of a sanguineous exhalation from the serous membrane of the excavation of the pelvis, Virchow was the first who, on the basis of anatomico-pathological investigations, demonstrated the origin of hæmatocele from the rupture of new formed blood-vessels in the pseudo-membranous products of partial peritoneal inflammation. That he may speak for himself, I quote at some length from his incomparable work *Die Krankhaften Geschwülste*, p. 149.

"In speaking in these modern times of a hæmotocele in woman, too, it is, to be sure, a different thing from an accumulation of blood in the processus vaginalis peritonæi (existing also in woman under certain circumstances). This, however, does not correspond accurately to the idea of hæmatoma; for we understand by it the accumulation of hemorrhagic substances in the excavatio recto-uterina: so that, by the quantity of blood-coagula accumulated in this place, a tumor-like mass originates, which sinks down towards the posterior fornix vaginæ, displacing the uterus, and which can be felt from the vagina and rectum as a firm tumor. This is the so-called hæmatocele retro-uterina, of Nélaton, or, as Aran* terms it, the tumer sanguineus peri-uterinus. According to my experience, we have always, in such a case, to deal with an accumulation of hemorrhagic material in the peritoneal cavity, although this is not always quite obvious. The accumulation itself is explained by the fact that all possible substances, which become free at all in the peritoneal cavity (consequently, also, extravasated blood) sink, according to the laws of gravity, into the excavations† of the pelvis. Moreover, it is not rare that, when inflammatory processes take place in these excavations and in consequence of them, a pathological condition of blood vessels takes place, local hyperæmias and hemorrhages originate, which are repeated from time to time, and gradually give rise to copious accumulations. In this latter case, it can happen that the peritonitis retro-uterina, like the pachymeningitis, generates

* *Aran, Lecons Cliniques sur les Maladies de l' Uterus et des ses Annexes.* Paris, 1858; p. 751.

† It may scarcely be necessary to remind the reader that, by "excavations," Virchow means the pouches formed between rectum and uterus on the one hand, and between uterus and bladder on the other, by the reflections of the peritoneum, called excavatio recto uterina and excavatio vesico-uterina, respectively.

pseudo-membranes, and that the extravasation which takes place out of the vessels of the pseudo-membrane is deposited between the layers of the latter, and thus a closed (encysted) hæmatoma retro-uterinum (H. pelvicum s. peri-uterinum, Simpson) originates. We see the like at times in men in the excavatio recto-vesicalis. The inflammatory genesis, which already Voisin has established with clinical accuracy, can here not be doubted, and the analogy with hæmatoma of the dura mater in only one point finds no application, namely, in this, that the prognosis in general is not unfavorable, and the absorption takes place with astonishing rapidity. **** Some authors, besides this intra-peritoneal hæmatocele, have described another distinct extra-peritoneal form, which is said* to lie in the base of the broad ligaments or between their layers, or at least beneath the peritoneum. I am inclined to think that in this they have fallen into errors. I have never seen in the corpse a primary extra-peritoneal hæmatoma formation, leaving out of consideration puerperal and traumatic cases. It is possible that a parametritis,† or, as Simpson calls it, a *cellulitis pelvica*, generates pus cavities in the vicinity of the uterus, into which a hemorrhage takes place; yet it is not advisable to call this hæmatoma. Generally, indeed, the membrane regarded as the peritoneum is a new formed tissue, which, like the pachymeningitic pseudo-membranes in the hæmatoma of the dura mater, is deposited on the old membrane, and beneath which the hemorrhage ensues in such a way that it is, to be sure, encysted by it. That the extravasation itself is invested secondarily by a pseudo-membrane consequent upon peritonitis, as Tyler Smith‡ believes, is less probable. I consider this as probable, the less as I do not share the view of most writers, according to which the entire extravasation derives its origin from the uterus, the ovary or the Fallopian tubes. Profuse hemorrhages proceed from the tubes almost only when they burst from tubal pregnancy,§ and I consider it as not impossible that cases here and there of this kind have been regarded as mere hæmatoceles. Profuse hemorrhages from the ovaries are still more rare. **** According to my view, the blood originates usually entirely, or for the greatest part, out of the new formed vessels of layers produced by partial peritonitis in the excavations."

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* *Puech. Gaz. Med. de Paris*, 1858, p. 164, 444. *Simpson's Med. Times and Gaz.* 1859, Aug., p. 153, 155.

† *Mein. Archiv.*, 1862. Bd. xxiii, s. 425.

‡ *Transactions Obstet. Society of London*, vol. iii., p. 101.

§ Compare the cases reported by myself in the *Würzburg Transactions*, 1850, Bd. i, s 298. 1852, Bd. iii, s 349. *Gesammelte Abhand.* s 792, ff.

The contributions of Schrœder to our theme are so important —this admirable author and sagacious physician having not only enriched the subject by valuable clinical observations, but with unsurpassed critical acumen having subjected to searching analysis all the facts bearing upon the pathological anatomy scattered through the periodical literature down to a recent date—that we must fain dwell at some length upon the conclusions at which he has arrived. And this the rather as his views are, in the main, identical with those which our own careful clinical observations have led us to adopt. He insists in the outset that, to avoid entire confusion, it is absolutely necessary to fix in mind the idea of hæmotocele retro-uterina intra-peritonealis as a blood tumor lying in Douglas' *cul-de-sac*, which displaces the uterus forwards. An extra-peritoneal blood effusion must be distinguished from hæmatocele, and to that end he terms the former hæmatoma or thrombus. For his further views, I quote from his recent work :*

"The hæmatocele intra-peritonealis forms almost invariably an encysted retro-uterine tumor, lying in Douglas' *cul-de-sac*. Separation from the remainder of the abdominal cavity is necessarily involved in the idea of hæmatocele, since free blood effusions in the abdominal cavity can never form a firm tumor displacing the uterus forwards; on the contrary, the free effused blood only forms a pool in the most dependent portion of the abdominal cavity, which is encysted by inflammatory new formations. The firm tumor displacing the uterus forwards can originate in two ways. It is formed, in the first place, when, already before the hemorrhage, a cavity existed shut off from the rest of the abdominal cavity by pseudo-membranes, *i. e.*, a cavity with walls lying in apposition (in the same way as we speak of a pleural cavity); so that while the posterior wall of the uterus and anterior rectal wall lie in juxtaposition, the Douglas' *cul-de-sac* is bridged over above. If, now, a hemorrhage ensues from a point situated beneath this roof, the blood is effused into the space closed in so as to form a sac, distends its walls, and thus forms a firm tumor, displacing the uterus forwards.

But, secondly, hæmatocele can also form in cases in which Douglas' *cul-de-sac* at the time of the hemorrhage was not encysted. In all these cases, however, no matter what the source

* *Vide Handbuch der Spec. Pathologie* von Dr. H. v. Ziemssen. Bd. x., von Dr. K. Schrœder, s 433. *Zweite Aufl.*

of the hemorrhage, there is not the immediate formation of the firm tumor dislocating the uterus forwards; but, on the contrary, there is only formed, so long as the blood is fluid and is not encysted, a pool in the inferior portion of the abdominal cavity, on which the intestines float. This pool of blood changes its situation with the varying position of the patient, but always fills the region of Douglas' *cul-de-sac*, since the latter, in the standing or lying posture is always the deepest part. But the blood, so long as it is fluid and not encysted (and this is of special importance), fills the Douglas' *cul-de-sac* only in the same way as the coils of the intestines do; that is to say, when the anterior rectal and posterior uterine walls separate from one another, in consequence of the bladder and rectum being empty, a considerable quantity of blood collects between these two organs; but as soon as the capacity of the Douglas' space diminishes, from the bladder and rectum becoming filled, the fluid blood, in part or entirely, recedes into the remaining portion of the abdominal cavity. **** But if the blood coagulates, or if it becomes encysted, it forms, to be sure, a perceptible retro-uterine tumor, because it can no longer yield; but still there is not the characteristic picture of hæmatocele. The tumor will be quite large if, at the time of the coagulation, the bladder and rectum were quite empty, while if both organs were full only a thin layer of blood will separate rectum and uterus.

From hæmatocele proper this blood tumor is discriminated by the circumstance that its walls are not tightly stretched; that it does not press the uterus forwards, and that it only fills out the true pelvis so far as the organs of the latter permit. The chief symptoms of hæmatocele are, therefore, wanting, which consist in the pressure which the tumor exercises on the organs of the true pelvis. If the hemorrhage occurred free in the abdominal cavity, an actual hæmatocele can only be produced when the hemorrhage originates from a place deeply situated, and when it persists quite slowly or is repeated. A single hemorrhage, occurring free in the abdominal cavity, for the reasons indicated, can never call forth the picture of hæmatocele, but if the effused blood, by its irritating influence on the peritoneum, has been encysted, and if the bleeding persists, or if it be repeated, the new hemorrhage no more now takes place in the free abdominal cavity, if it originates from a place situated beneath the roof, but in the closed Douglas' *cul-de-sac*. The conditions are now, consequently the same as in primary closure of Douglas' *cul-de-sac*. The blood which is extravasated out of the vessels distends the new formed roof, compresses the rectum, prolongs the

floor of Douglas' pouch downward, and presses the uterus against the symphysis."

In regard to the formation of hæmatocele ante-uterina, he expresses himself as follows:

"As hæmatocele ante-uterina, we designate a bloody tumor in the peritoneal fold between uterus and bladder. At this place a blood-tumor can form under different conditions. On the one hand, it can appear here as a partial phenomenon of a larger retro-uterine one, when the process by which the effused blood is encysted extended above and beyond the uterus to the anterior abdominal wall. We find, then, the excavatio vesico-uterina filled with blood. Very rarely the hæmatocele ante-uterina is formed, when the peritoneal pouch lying in front of the uterus is bridged over, and the hemorrhage takes place within this closed space, as in the case reported by G. Braun.* Such cases are very rare on the one hand, because peritoneal adhesions in front of the uterus much less frequently occur than behind, and on the other, because Fallopian tubes and ovaries, which frequently give rise to hemorrhage in closed retro-uterine spaces, are not so easily dislocated as to lie in the excavatio vesico-uterina."

Having now considered the most prominent theories advanced in explanation of the phenomena of retro-uterine hæmatocele, let us see which one can furnish a key to the proper comprehension of our problem, and enable us to write our Q. E. D. beneath its demonstration. As we intimated above, we regard the views of K. Shrœder as most in harmony with the truth, and therefore concur in them most heartily; only, we are inclined to think that while the clinical phenomena at times observed, would certainly lead us to admit as correct his explanation of the origin of hæmatocele in the way mentioned in his second class of cases (*i. e.*, first a free blood effusion, then the formation of a closed space by adhesive peritonitis, the hæmatocele being subsequently developed by the gradual but continued effusion of blood or a renewed attack of hemorrhage), yet, that this genesis must be considered as true in a very limited number of cases. We are also in accord with this author when he, as Bernutz, Meadows and others, urges the separation of all blood effusions into the connective tissue surrounding the uterus and into the broad ligaments (which Sir James Y. Simpson thought was the most fre-

* *Wiener Med. Wochenschrift*, 1872, No. 22 u. 23.

quent seat of hæmatocele) from hæmatocele, and think with him that the extra-peritoneal blood effusions should be designated by the term *hæmatoma* or *thrombus*—the hæmatoma being usually observed in connection with puerperal processes, or having a traumatic origin; moreover, possessing distinctive clinical features, as we shall show when we come to speak of the differential diagnosis. We assert now that it is a well defined tumor, resulting from an extravasation of blood into Douglas' *cul-de-sac*, previously closed in, dislocating the uterus forwards toward the symphysis pubis, pressing the fornix vaginæ downward, and encroaching to a greater or less degree upon the rectum that can alone evoke the symptoms of retro-uterine hæmatocele.

As its analogue, we have an ante-uterine tumor as a rare event, developed under the circumstances mentioned by Schroeder, which likewise demands unconditionally the existence of a pre-formed cavity, antecedent to its formation. With singular inconsistency, Hermann Beigel* admits that the pre-existence of an adhesive peritonitis is a necessary condition to the development of an ante-uterine hæmatocele, but denies this in the case of retro-uterine hæmatocele. His definition of hæmatocele embraces under that term "all blood effusions in the female pelvis, whatever their nature may be, and whatever their course may be." As is well known, Graily Hewitt,† Barnes‡ and Thomas§ similarly extend the meaning of the term hæmatocele, so as to include under it not only all extra-peritoneal blood effusions in the neighborhood of the uterus, but also non-encysted, or, as Barnes designates them, *cataclysmic* hemorrhages—whether the source of the bleeding be a ruptured uterus, or a ruptured fœtus-containing cyst in extra-uterine pregnancy. By no possibility, however, can a free hemorrhage into the peritoneal cavity ever call forth the symptoms characteristic of hæmatocele. Scanzoni,‖ accepting the views of Schroeder, says: "That an effusion of blood which has taken place into the peritoneal sac, will only be

Vide his magnificent work, which, by the way, he dedicates to our distinguished countryman, Dr. J. Marion Sims,—*Die Krankheiten des Weiblichen Geschlectes*, Bd. II, s. 133.

† *Pathology, Diagnosis and Diseases of Women*, 2nd Amer. edit., pg 487.

‡ *Clin. Hist. Med'l and Surg'l Diseases of Women*, Amer. edit., p. 506.

§ *Practical Treatise on Diseases of Women*, 4th edit., pg. 492.

‖ *Lehrbuch der Krankheiten der Weiblichen Sexual-Organe*. 5te. *aufl.* p. 470.

perceptible as a more or less plainly circumscribable tumor when it has been solidly bounded by an exudation, the result of peritonitis, which has become firm." Klebs,* the eminent pathological anatomist, expresses himself as follows: "I cannot, then, admit that that condition of the hæmatoma retro-uterinum is generated also by a free effusion of blood into the true pelvis, which is prevented from further expansion, either by coagulation or by adhesion of the intestines."

We are shut up to the view just advocated by the following facts, which seem to us to allow no other alternative. *In the first place*, we never have a firm, elastic retro-uterine tumor displacing the uterus and perceptible from the vagina, in those instances where free effusions take place into the abdominal cavity, no matter whether these effusions are blood, dropsical accumulations, or exudations resulting from partial peritonitis. In cases of ovarian cystic tumor complicated by ascites, such a retro-uterine tumor is never observed, although here the intra-abdominal pressure must be greatly augmented. *Secondly*, The clinical phenomena characteristic of a case of hæmatocele clearly indicate the existence of a hemorrhage in the true pelvis, which finds obstacles to its expansion in the direction of the general peritoneal cavity. Hence the very decided pressure on neighboring parts, which causes a large portion of the symptoms observed. Says Klebs (op. cit., s. 834): "That this segregation of the space in which the blood effusion takes place must have existed already before, and have been determined by firm masses of tissue, seems to me to result as a simple and necessary consequence from the group of symptoms before noticed." *Thirdly*, The result of *post mortem* investigations invariably shows that the accumulation of blood has taken place into Douglas' *cul-de-sac*, which has been closed above in consequence of a preceding partial adhesive peritonitis. So, in the rare case where an ante-uterine hæmatocele is developed, the vesico-uterine pouch is similarly bridged over. *Finally*, In at least three instances, we were enabled to diagnosticate positively the existence of adhesions between the uterus and rectum, the remains of previous partial peritonitis, in the subjects of which hæmatocele was subsequently developed. To two of these cases we will recur hereafter.

[To be continued.]

* *Handbuch der pathologischen Anatomie*, 4te Lief. s. 834.

ART. V.—*How to use Adhesive Plaster in Chronic Mammary Abscess.* By HUNTER McGUIRE, M. D., Prof. Surgery, Medical College of Virginia, Richmond.

I know of no operation in minor surgery that requires more individual tact than the successful application of adhesive straps to the breast in chronic mammary abscess; and yet when, through neglect or mismanagement, or, as will often be the case in some feeble and strumous women, in spite of every care, the matter has burrowed about, and numerous sinuses have formed, there is no means so rapidly remedial as pressure properly applied in this way.

The use of compressed sponge, retained by a bandage around the body, has the serious objection of interfering with respiration, and the pus which it absorbs soon undergoes decomposition, and becomes offensive. That cruel practice of following the sinuses with a director and slitting them up to make them heal from the bottom, was a slow and unsatisfactory method, and I hope has been universally abandoned—less severe, but equally unsatisfactory is the attempt to close the passages by stimulating injections of any kind.

Although the mammary gland differs in size, shape and position on the thorax, in different women, the following plan of applying the strips of plaster will, I think, answer in nearly every case. A dependent outlet for the matter should be secured if possible, and this opening and others, if more than one sinus exists, should be left uncovered by the plaster. Cut the plaster into strips from four to six inches in length, and from a half to three quarters of an inch in width, according to the size of the breast. After warming the plaster apply one end of a strip to the circumference of the gland near the axilla. Take another strip of the same length and width and fasten its end to the inner circumference of the breast near the sternal bone. The ends of the two strips of plaster thus applied are held in place by an assistant, while the surgeon takes the free extremities of the strips, and drawing them towards each other, that is, drawing the breast from its circumference towards its centre—crosses the strips and fastens them. Two more strips are then applied just below and lapping slightly the first two pieces. Continue in

this way till the whole breast is covered, (somewhat upon the same principle and manner that we use strips in an indolent sore on the leg) leaving the nipple and fistulous orifices uncovered. A piece of moistened lint is placed over the sinuses to catch the pus which escapes. If properly applied the adhesive plaster makes uniform compression, and from the circumference towards the nipples. At every inspiration, the strips are made tighter and the pressure greater, and in this way the sinuses are emptied and their walls approximated. The strips should be daily renewed. This application of plaster is useful also in chronic induration of the breast, and to prevent purulent infiltration, as well as for the cure of these old sinuses. Along with the above local treatment there are usually required, fresh air, exercise, and general tonics.

ART. VI.—*Rupture of the Womb, with Recto-Vaginal Fistula —Spontaneous Recovery.* By A. W. FONTAINE, M. D., New Canton, Va.

Recent developments go to show that the womb is ruptured "spontaneously" more frequently than was once supposed. For the last two or three years, such cases have been reported in the journals with increasing frequency; hence they do not now excite as much interest as they once would have done. Nevertheless, I feel it incumbent upon me to relate the following case—not so much to call attention to the bursted womb as to the spontaneous recovery from the sad complication of a large hole in the recto-vaginal septum.

M. M.,—æt 28 or 30; short, square, and strongly built; of dark complexion; dull, apathetic, and below the average in intelligence, sent for me on a Thursday in the Spring of 1873. I got to see her about 4 P. M. the same afternoon. She had been away with other relatives for several months, and her brother's family, with whom I found her, seemed to be unaware of her actual condition. They thought she had "the colic," to which she was subject, and were so indignant when told that she was in labor (she being unmarried) that they prepared to leave the place, when a charitable neighbor took her to her house, half a mile distant, though she had been in labor over 15 hours, by her own account. Before this was resolved on, I made a critical examination; and foreseeing a tedious and difficult, if not a dangerous

time ahead, from narrowness of the pelvis, requested other medical aid; for I was so reduced by chronic intermittent fever in bodily and mental vigor that I felt incompetent to undertake her case. She declined to engage another physician and sent for a midwife with whom I left the case.

Examination per vaginam showed a pelvis quite narrow in all its diameters—no exact measurements taken. The os uteri was dilated to 2 or $2\frac{1}{2}$ inches and dilatable; pains were tardy and still very slight. She made no complaint, and seemed resigned to any course; therefore I gave my consent to her careful removal. I ordered some castor oil to be followed in due time with some stimulants; and I returned home late Thursday afternoon very sick.

Being kept at home by sickness most of the next day, I could not keep up observations, and can give no account of the history of her labor until Saturday morning, when I was recalled by the lady of the house, by a note urging me to come at once, and "prepared for an emergency." On arriving about 10 A. M., I found the patient cold, pale and almost pulseless, but calm. The midwife explained that "the pains had *worked backwards* until they had got *high up in the right side.*" The patient told me she had not been suffering very much at any time since I saw her two days before; had had *no hard pains.* I gave her at once some hot whiskey toddy, with ginger, camphor and hartshorn, and proceeded without delay to a strict investigation. The head had receded far up in the pelvic cavity, and the breech of the child could be plainly felt through the abdominal walls, with its feet and legs impinging on the liver of its mother. The rent (which was in the right anterior quarter of the fundus) of the womb was grasping the fœtus around the middle of its body. Delivery by forceps was quickly attempted. One blade was with difficulty placed in position; the other could not be introduced at all—there was not room enough for both blades at once. Craniotomy was the only chance. There was no time for consultation—very little for consideration. The next neareast doctor was full four miles off. One minute might be a fatal delay for the woman. The child, I supposed already dead, as there had been no quickening since late Thursday night—at least none recognized. So, weak and suffering in body and mind as I was, I had to meet the issue alone.

With such willing assistance as two women could afford, I proceeded at once to puncture the scalp, empty the skull, tear out some of the cranial bones, clutch the scalp with the fingers and thumb of the right hand, and pull it down and out through the vulva at one movement, not relaxing this hold until the shoulders,

by rotation and traction, were brought low down in the pelvis. All the time the left hand was employed in a firm, downward pressure on the breech of the child through the abdominal walls of the mother. Having got the shoulders within easy reach, a finger was hooked in the axilla of the side nearest the pubes, whilst pressure was continued from above with the other hand; the shoulders and hips were delivered by the same movement. Then "going for" the placenta, with my right hand in the uterine cavity, guided by the cord, that too was found to have slipped through the uterine fissure, at least two-thirds of its bulk being outside of the womb, and, of course, in the abdominal cavity! Traction on the cord was of no use; it broke on very slight traction. Then the edge of the placenta was grappled with the nails of my fingers buried in its surface of attachment, whilst the thumb made counter pressure on the opposite or convex side; thus it was dragged back into the womb and thence delivered.

The whole operation did not consume a fourth of the time required to describe it, but short as it was, my patient was nearly gone at its conclusion. The womb was kneaded down into the brim of the pelvis; a thick compress and bandage were quickly applied; the foot of the bed and the hips of the woman were elevated to the highest degree compatible; dry heat and friction were sedulously applied under the bed covers; stimulating drinks with fluid extract of ergot were given as fast as she could take them, and so on, until reaction had fairly come on. Then she took a full dose of opium, from which she slept six or eight hours. Opium was continued in suitable doses, and often enough to keep her drowsy, and to "lock up" her bowels for about a week.

Now as to the fistula. Upon the first attempt to apply the forceps, the head receded a little; the blade was withdrawn; the head then came down from the pressure above, and just before it there was a gush of liquid fœces into the vagina. From this it was quite certain there was an open communication between the rectum and vagina. After the delivery, and some degree of comfort had been restored to the patient, a finger passed along the posterior wall of the vagina came to this fistulous opening, just below, and a little to the left of, the sacral promontory. This, of course, was regarded as a very serious complication, but the sequel did not so prove it. For several weeks there was more or less of fœcal matter passed through the vagina; but it gradually diminished in quantity until it ceased entirely. And in the 8th or 9th week a specular examination displayed a rough, puckered cicatrix, about an inch and a quarter long, and slightly raised, like a raphë.

It seems that the bladder, too, came in for a share of misfortunes. From prolonged pressure it seemed to have lost the power

of contracting on its contents; so that all her urine had to be discharged through a catheter for 12 or 15 days. Under a strong tonic course this trouble was gradually overcome, and she went on slowly to recovery; and in two years, when I saw her again, she was in ordinary health, not married, and not—pregnant any more!

Rupture of the womb is confessedly one of the most frightful diasters that can occur in any labor. Since it does sometimes occur spontanecusly, it may sometimes be expected—but is not so easily prevented. To be forewarned is the privelege of a few; to be forearmed is the duty of all practitioners where any previous knowledge of defective pelvic conformation of the patient can throw any light on the subject. Prompt action and judicious management alone can save a patient in so terrible an affliction.

I should not omit to state that although the cure of this recto-vaginal fistula may be called spontaneous—in as much as there was no surgical operation resorted to—the hygienic and medical treatment of the same was calculated to favor such a result. The strictest quiet and cleanliness were enjoined; carbolized vaginal irrigations, first tepid, afterwards cold, were often used; and later, injections variously medicated—chiefly with astringents, carbolic acid, glycerine, &c.—were kept up during convalescence. After the first week or ten days, her bowels were kept as soluble as circumstances permitted; and all straining at urination or defecation were positively prohibited. She was directed to lie on her back as much as possible, in which position she was required to evacuate the bowels and bladder in a bed-pan. She was kept on a diet of cream, milk, eggs and animal broths principally, in order to reduce to the minimum the amount of fœcal matter to be discharged through the wounded rectum, whilst, at the same time, the diet was nourishing to the fullest extent. These measures were enforced more or less strictly for about eight weeks.

The results of this management, if happily they were due to such, would seem to indicate that many such cases of fistulæ would prove amenable to such a plan of treatment; and that this ought to be faithfully tried during convalescence from labor instead of leaving patients to themselves for the first month or two after the accident, with *no other expectation* than tedious, diffi-

cult surgical operation—and that, somewhat doubtful as to result after all.

This poor woman did not seem to suffer as any one would have expected under such a terrible trial. Perhaps her very *inertia* of constitution predisposed her more than anything else to a final recovery. Had she been one of a nervous, excitable, irritable temperament, it is likely the termination would have been far different. She seemed to be unconscious that anything had *given away* when the womb was torn.

Clinical Reports.

A Case of Adenia, or Hodgkin's Disease. W. H. Taylor, M. D., Washington, D. C.

Mary S., white, æt. 9 years; mother living; father died of malarial fever. Mary is the fifth of seven children; all except Mary healthy. The father and mother are of good healthy families, farming people. On the mother's side, there are 17 males with the family surname still living. So far as I have been able to ascertain, there is no hereditary disease of any kind in the family of either father or mother.

I was called upon to prescribe for Mary, February 6th, 1871, on account of a small tumor which had been noticed a week or so previous; it had given no trouble whatever, but as I was in the house my attention was called to it. I found the tumor very firm, slightly elastic, from three-fourths to one inch in diameter. It was situated on the neck, about one inch below the left ear, and on the border of the sterno-cleido-mastoid muscle. There was no redness or tenderness about this tumor; firm pressure produced no pain. I thought the tumor nothing more than an enlarged gland due to cold, as the child had been suffering from a cold a week or ten days previous—that is, about the time the enlarged gland was first noticed. I prescribed some liniment, and directed that it should be painted with tinct. iodine if it did not subside in a few days.

I did not see this patient again until February 27th, three weeks after first seeing her. Her mother sent her to see me as the gland had considerably enlarged, and other of the cervical

glands had commenced enlarging. I put the patient on iodide of potassium, cod liver oil and iron, thinking the glandular tumors due to scrofula. This treatment had no effect whatever upon the swelling. Hence, after satisfying myself to that effect, I sent the child to a distinguished physician of this city, who after examining the case, recommended a continuance of the iodide of potassium and cod liver oil, which treatment was accordingly continued for a number of months—omitting the iodide of potassium, however, from time to time as the stomach became disordered, and continuing the cod liver oil with iron or some bitter tonic with stimulants.

I thought at times that the glands were becoming reduced in size, and had great hopes of a favorable termination of the case; but these appearances were delusive, for after a time the tumors would take a fresh start and enlarge considerably without any appreciable cause, and other glandular enlargements would make their appearance. This state of things continued up to December 1872, when the enlarged gland first noticed had attained such dimensions as to infringe upon the trachea, and seriously impede respiration.

I now gave up all hope and expectation of controlling the disease by medical treatment, and sent my patient to St. John's Hospital, Washington, D. C., to be operated upon, so as to give temporary relief to the symptoms of suffocation. The operation was very successfully performed by Dr. N. S. Lincoln, of this city, January 3d, 1873. The specimen is preserved in the Army Medical Museum, and I am indebted to Dr. E. M. Schaeffer, for a description of its appearance under the microscope, which I append to this article. The patient made a good recovery and enjoyed good health for a considerable period, but the tendency to glandular growth still continued, and the glands of the opposite side became prominent a few weeks after the operation, while those on the side and that were in immediate proximity to the removed gland increased rapidly in size.

Nov. 8, 1873. Sent the patient to Baltimore to consult Prof. N. R. Smith, M. D. I do not know what he thought of the case. I only judge from the statement of the mother of my patient and from the course of treatment recommended, that he considered it a case of scrofula, and that he thought the case would terminate favorably in a short time by suppuration of the

diseased glands. The treatment recommended by Prof. Smith, was continued for one month, but there was no appearance of supuration in the glands; and as the child's health became very much impaired I abandoned the treatment and put her on tonics and stimulants again, under which she rapidly regained flesh, strength, and spirits, and was apparently well—always excepting the tumors.

April, 1874. The glands in the axilla became enlarged, and there was considerable dulness upon percussing the anterior portion of the chest, as I supposed, from enlargement of the chain of glands extending down the anterior mediastinum. The heart's action became much deranged; pulse over one hundred per minute. Dr. W. H. Triplett was kind enough to examine the blood for me, but nothing unusual in appearance was detected.

May, 1874. Inguinal glands very much enlarged.



In the accompanying photograph you will see the appearance of the child in October of this year (1874). Previous to this time I had been treating her with iodoform (as recommended by Dr. Jas. Martin, of Brookville, Md., Aug. 7th, 1874). As shown in the photograph, the cervical glands appear much enlarged; also the glands of the axillary region, though not shown so perfectly in the picture.

At this time I put her upon tincture of ergot, but had to discontinue it in a short time in consequence of the stomach becoming disordered, and no benefit resulted. From this time to the time of the patient's death,

no medicines were given with a purpose to control the glandular growths; I only prescribed such things as would give temporary relief to some of the more distressing symptoms.

All through the fall of 1874, the child seemed quite comfortable, and in good spirits. I would state that she was of a patient disposition, seemed to realize her condition, and to be resigned to it. The case was very trying to the medical attendant, as there appeared to be no prospect of giving relief; death in a most distressing form seemed inevitable.

The disease at times appeared to be checked for a while, but would soon take a fresh start, and all the glands hitherto enlarged would increase in size, and others not noticed before would suddenly make their appearance. They seemed to grow in a night. This was more particularly the case during the last year of the disease. At these times of accession of glandular growth there would be considerable constitutional disturbance.

January, 1875—M —— began to lose flesh and become dropsical in the lower extremities; a troublesome cough with shortness of breath also supervened at this date. Her strength rapidly failed and she remained in bed most of the day.

February 11, 1875—Condition very bad, pulse rapid, weak and compressible; she has become greatly emaciated and very anæmic, unable to sit up except only for a few minutes at a time. Cough constant, œdema of lower extremities and right arm considerable.

March 25, 1875.—Unable to stand; dropsy in legs and arm increased; emaciation very great; glands reduced very much in size; frequent bloody evacuations from the bowels. Dulness over almost the entire anterior aspect of the chest. The heart seemed to be pressed towards the left side and was very labored in its action; breathing rapid. This condition continued until April 8th, 1875, when death supervened. Unfortunately an autopsy was prohibited.

The immediate cause of death was effusion into the lung tissue.

Cases of this kind are not frequently met with and are not well understood. I cannot say that, in this case, the treatment did one particle of good; on the contrary, I found that iodide of potassium, iodoform and mercurial preparations produced positive harm. Cod liver oil and whiskey seemed of most benefit,

especially when quinine was given at the same time. I could not persevere in one course of treatment for any great length of time, for some friend or relative would suggest a consultation, and then everything would be changed. Stimulants acted very well in restoring the appetite and facilitating digestion; but I found it impossible to continue the administration of stimulants for any considerable length of time, owing to the child's disgust to everything of the kind after a few days' use.

I will close this article with Dr. Schaeffer's Microscopical Description of a section of the tumors removed by Dr. N. S. Lincoln.

Description of Microscopical Specimen, No. 7047, *Army Medical Museum—labelled Lympho-Sarcoma.*

This specimen is a section of an enlarged cervical gland, in a case of general enlargement of the lymphatic glands. It is stained with carmine, and mounted in balsam. The section includes on one side a portion of the capsule of the gland. On inspection with a low power, it presents the appearance of a gland uniformly hypertrophied, with thickening of the capsule, and large connective tissue septa radiating from a nearly central mass of that tissue. Here and there, however, are seen foci of new cells—some larger, some smaller than the surrounding gland elements, indicating active growth of a character not usually found in simple hypertrophy. These cells are highly refractive, more deeply tinted by the carmine than the gland-cells proper, and contain one or two oval nuclei with but little surrounding protoplasm. The animate reticular framework of the gland when seen shows no abnormal increase in thickness, the hypertrophy of connective tissue being confined to the capsule and septa above mentioned. No indication of softening or cheesy transformation is seen in any part of the section, nor any cells resembling in shape or arrangement those of a malignant growth.

The patient from whom this tumor was removed was brought to me at a late stage of the disease to have her blood examined microscopically. The normal proportion of the white to the red corpuscles was in no degree altered, and the only abnormal feature of the blood consisted in the presence of flocculi of granular matter resembling broken down white corpuscles everywhere present in the blood when freshly drawn from several points. I have, however, observed a similar phenomenon in the blood in a case where no glandular enlargement existed, and am not prepared to connect it with the disease as an essential feature.

The absence of increase in the number of white corpuscles

corresponds with the statements of Trousseau and others in relation to Hodgkin's disease or adenia. But the form of sarcoma called *Lympho-Adenoid* by Rindfleisch in its least malignant type, begins as a simple hyperplastic enlargement of the gland structure; and in the absence of any history this specimen might have been classed as one illustrating the early stage of that growth.

[We failed to make at the proper place (page 507) our acknowledgments to Mr. M. J. Powers, photographer, 804 W. Main St., Richmond, for the photograph of the case of Adenia.]

A Rare Complication of Locked Heads in Twin Labor. By David Steel, M. D., A. M., Petersburg, Va.

I was invited by my friend, Dr. Harwood, of this city, to see Josephine Alfriend, colored, aged 20 years, primapara. She was taken in labor Thursday night, June 10th, about midnight. Dr. Harwood was sent for early next morning, but did not see her until 9½ o'clock. He found the lower extremities and part of the body of a child protruding from the vulva; upon making a further examination, he found that the head of another child presented at the superior strait, before and below the head of the first. Dr. H. gave her tinct. opii, gtt. xxv, to quiet uterine pains, and sent for me.

I saw her at 11½ o'clock, and found her lying upon the floor, with the extremities and part of the body of a child hanging from the vulva, as before stated. I immediately had her put to bed, and, after bringing both arms down, I introduced my hand into the vagina behind the first (the pelvis being large and roomy), and found the head of the second child just below the superior strait—its position being that of right-occipito-posterior—and the head of the first just above the superior strait, its position being that of left-occipito-anterior—the occiput of first to left and in front; the occiput of second to the right and behind. The tops of the heads were in contact with each others' shoulders, and their faces rested against each other, but in opposite directions—thus forming a complete impaction. The uterine pains were strong, and at each return of pains the impaction became greater and greater, rendering natural delivery impossible.

Desiring further consultation, Drs. Jeffrey and Dunn were soon with us. Stating to them the nature of the case, and they finding, upon examination, her condition as described, I proposed to operate in one of two ways—first, to introduce my hand into the vagina and rectify the position of the second child by elevating it; and if that failed, to decapitate the head of the first and then deliver the second child and head of the first with forceps. This being agreed upon, I proceeded to deliver. Dr. Harwood administered chloroform, and when the patient was fully under its influence, I attempted to introduce a catheter into the bladder, but failed on account of pressure against the urethra. Dr. Dunn tried and also failed. I then attempted delivery without drawing off her water, by introducing my left hand into the vagina, and grasping the head of the second child in the palm of my hand; and after firm and steady pressure in the direction of the axis of the superior strait, upwards and forwards—Dr. Dunn at the same time steadily pressing the uterus upwards externally—I soon had the satisfaction of pushing the head back into the uterine cavity, with a sort of suction sound. As soon as the head was well up, I suddenly changed the position of my hand, bringing the back under the head of the second child, and made still upward pressure; upon straightening out my fingers, I found them resting upon the head of the first, which I depressed, and at the same time made traction with my right hand on its feet, and delivered the fœtus without trouble. The second I delivered with forceps. Both placentæ came away without any difficulty.

The operation, from first introduction of my hand to full completion of labor, did not occupy more than five minutes. The twins were fine, large boys—the first born dead, the second gasped two or three times, and then died. The heads and faces of both children were pressed quite flat, on account of their position and strength of uterine pains. The mother recovered rapidly without an unpleasant symptom, and wanted to get out of bed at the end of two or three days.

I have been in the practice of medicine over 23 years, and this is the first case of the kind I have ever seen; in fact, none of the gentlemen present with me had ever seen such a case before.

Cerebral Embolism—Hemiplegia of Recent Origin in a Syphilitic Subject—Post Mortem. W. D. Bizzell, M. D., Demonstrator of Anatomy in Med. College of Alabama, etc.

Frank, colored, aged 40, inmate of County Asylum; history of syphilis dates back about 10 years; has been unable to earn his living for the past four years. Was an inmate of the Asylum for a short time about two years since. Has been admitted to the Charity Hospital in this city several times in the past few years—once with symptoms of meningitis, followed by paralysis, from which he gradually recovered.

He was admitted to the Asylum for the last time about the middle of January, 1875. After his admission, he complained almost constantly of pain along the spine—especially in the lumbar region—and of a constant feeling of malaise. Has nodes on the tibia. Recognizing the constitutional poisoning under which he labored, he was put on iodide of potassium, combined with syrup of iodide of iron, without, however, any apparent benefit. On my regular visit, about March 1st, he called my attention to a diarrhœa from which he was suffering—not painful, but a looseness, requiring him to get up several times through the night. I ordered chalk mixture, combined with astringents, which controlled the diarrhœa for a few days, when he was again troubled. This condition continued for several weeks. I stopped the iodides in the meantime, thinking they had something to do, perhaps, in keeping up the disturbance of the intestinal tract. He was still able to sit up most of the day, and his appetite was fair, and when his bowels did not disturb, he slept very well.

On the morning of March 14th, those who slept in the same room with him noticed that he did not get up, and that he was unusually quiet. On approaching him, they discovered that he was speechless and paralysed in the arm and leg of the right side. One of the inmates then recollected that he had complained the previous evening of a coldness and pricking sensation or tingling both in his right arm and leg. He had been very much troubled with his bowels, and was confined to his bed throughout most of the day previous to the attack, though he was not troubled much during the night in which the attack had developed itself.

As this was my regular visit day to the poor-house, I saw him a few hours after the paralytic symptoms had been discovered. I found him lying on his back, with his eyes open about half the time, but he seemed to labor under a sort of mental hebitude; after gazing around with a look of partial intelligence, he would close his eyes as if from utter weariness. Pupils of the same size, moderately dilated, but re-acted sluggishly to light. The eyeballs moved freely in their sockets, and the lids closed perfectly; there was no paralysis of the facial muscles, so far as could be detected. There was no stridulous respiration; no puffing in and out movements of the cheeks; respiration and pulse both tranquil; when the eyes are closed, he has the appearance of one calmly sleeping; he evinces great repugnance to swallowing anything—medicine, food, or even water.

From the suddenness of the attack, I concluded—the symptoms not being those of apoplexy—that it must be a case of embolism of some of the larger arteries of the brain; and as the organs of speech were affected, and the limbs of the right side, in all probability it was the left middle cerebral artery which was involved, as physiologists tell us that the third convolution, posterior and external to the fissure of Sylvius, is the centre for the organs of phonation. He could be forced to swallow only with so much difficulty that I was forced to make some special apparatus or arrangement to ensure his nutrition. Taking an old Davidson syringe, I cut it through the bulb, thus leaving a funnel-shaped opening, with the tube attached. I instructed the attendants how to use this, introducing the tube far back in the pharynx. The medicine, liquid food, broths, beef tea, etc., were poured in at the funnel-shaped extremity. The patient seemed to have a dogged determination not to swallow anything—clinching his teeth and spitting out all that he could. I ordered him to be fed as well as circumstances would allow, knowing that his only hope lay in the conservative effect that time might give in the establishment of a collateral circulation to the part of the brain now cut off by the embolus from the systemic circulation. I, however, ordered in prescription ten grains of potass. bromidi and twenty-four drops fluid extract cannabis indica three times a day. I saw him every day, and sometimes twice a day, but he did not improve, but rather grew worse, and seemed t

be in a state of stupor most of the time. His bowels, however, gave him no more trouble—in fact, became rather constipated, requiring remedies to keep them open.

By the end of the first week after the attack, he could hardly be made to take any nourishment whatever, though I insisted strongly on its being assiduously given. But the attendants did not introduce the tube with sufficient dexterity to accomplish much. Besides, it was only a sort of forlorn hope with me, believing, as I did, that there existed irreparable disorganization of the brain. He died March 29th, fifteen days after his attack, having taken scarcely any nourishment for the past six days.

Post Mortem 18 hours after death. Brain only examined. On removing the skull-cap, there was more or less intimate union of the dura mater to the calvarium, which we attributed to the old meningitis. The brain was removed entire, and carried to my office in the city. There a careful dissection was made, confirming the diagnosis, as the middle cerebral artery was plugged with a firm ante mortem clot; there was commencing softening just posterior to the fissure of Sylvius, involving nearly all of the white matter of the middle and posterior lobes of the brain, extending down to and involving the thalamus and crus cerebri of the left cerebrum. The quantity of cerebro-spinal fluid was about normal; there was no hemorrhage nor collection of pus anywhere discoverable; the ventricles were normal; the arachnoid and pia-mater seemed unusually vascular, and the velum interpositum was studded with little red vascular masses about the size of millet seeds. The right side of the brain was apparently perfectly healthy, save, perhaps, a little more vascular than common—its firmness and consistency being in marked contrast to that of the left, which was perfectly soft and diffluent, breaking down under a fine stream of water, or on the slightest touch—looked exactly like that appearance presented on section of the brain from a subject that had been preserved in a dissecting vat for some time.

Remarks.—This was evidently a case of cerebral embolism of the left middle cerebral—the "arteria fissura Sylvii" of Niemeyer, who says on this subject: "The sudden shutting off of the arterial blood from the part of the brain supplied by the ob-

structed artery, instantly arrests its functional power." Experience shows that the emboli almost always lodge in the arteria fossa Sylvii, *particularly the left one.* As the closure of this large artery causes great anæmia of the parts supplied by it, we may readily see that sudden hemiplegia, especially of the right side, is the most important symptom from which we can diagnose embolism of the cerebral arteries, if it occur in a patient with valvular disease," &c.

In our patient, there were no symptoms of heart disease apparent after his seizure, nor had any been suspected previously. The question, then, naturally arises, What produced the embolism? I am disposed to regard it as a consequence of structural change in the walls of the artery itself, due to the syphilitic poisoning under which his constitution labored. I think the mechanism of its production was somewhat in this way—and inspection of the plugged portion of the artery seemed to favor the same conclusion—namely: the walls of the vessel being atheromatous and thickened, and presenting in consequence, a smaller channel for the flow of blood; and the lining membrane being at the same time more or less roughened, over which surface the blood, continually passing, deposited more or less fibrine, still further diminishing the blood supply to such an extent as to produce some impression on the nerve centres. It is to this I attribute the coldness and tingling sensation which the patient referred to his right arm and leg twelve hours before the paralysis and insensibility set in. The unconscious state of the patient, which, according to Niemeyer, always accompanies and marks a case of embolism in this situation, physiologically seems quite remarkable when we remember that the whole of the right hemisphere was, to every appearance, perfectly healthy.

Correspondence.

Some Uses of Eucalyptus Globulus—An Old Woman's Prescription for Post Partum Hemorrhage—Birth During Twelfth Month of Pregnancy.

Mr. Editor,—I have been to some extent experimenting with eucalyptus globulus. The first case in which I used it was one

of arthritis. The leaves were bruised and bound to the parts with the result of relieving the very acute pain in fifteen minutes. A decoction of the bark and leaves was then given, which brought about a cure in one week. A case of ague and fever, which had been treated with quinia, arsenic, &c., was cured in four days by simply taking the essence of eucalyptus (prepared from the oil distilled from the leaves) ʒij three times a day. I believe we possess in the eucalyptus a remedy not inferior to the cinchona alkaloids. The oil applied to the nerve of a tooth soon destroys its sensitiveness and quiets the pain. In purulent catarrhal affections of the urethra *it acts like a charm.*

Some years ago I had a case of post partum hemorrhage, which, notwithstanding my best directed efforts, seemed to threaten the life of my patient, when an "old woman" told me to take the "white of an egg and mix with it enough alum to form a plaster, and place on her back close above the hips," which, I must say, to my surprise, checked the bleeding immediately. Since then, I have tried it in 18 cases, and have found it to work like a charm, almost without a failure. I believe the above will prove of great value in the hands of the profession, while it possesses the advantage of not standing in the way of the treatment of the patient by other remedies at the same time. Many will laugh at such a prescription, and I do not attempt an explanation of its *modus operandi.* But, as amusing as it may seem, or as unscientific as the prescription may be, I yet know it does good.

I also report the following rather unusual case: *Sept.* 17, 1873, I was called to Mrs. A. R., aged 19 years, in labor, primapara. Accouchment was expected about July 8. About that time, her husband, in attempting to leave the bed in the morning, accidentally fell with his knee on his wife's abdomen. For some minutes, she says, the pain caused by the accident was quite severe, but then passed off, and no further thought was taken of it. Three weeks passed by, and a midwife was consulted, who assured her that everything was all right. About this time the cellular tissue about the eye became suffused, or congested, and her breath gave evidence (they say) that all was not right. However, no further steps were taken to ascertain the extent of the injury until Sept. 6, when the midwife was

called in by the husband. She assured them that nature was competent, and they must wait patiently. The patient was at the time confined to the bed.

On September 8, I was called in great haste to the bedside, as the midwife said something was passing away from her. I found the head of a decomposed fœtus low down in the vagina. I lost no time in cautiously delivering it, without pain of any kind, piece by piece; the stench, however, was such that the women had to leave the room. As soon after as practical, counsel was called, and it was thought that she could not live. She, however, lingered on until the 25th, when death came to her relief.

PAUL BOYCE, M. D.

Borden, Cal., August 12, 1875.

Proceedings of Societies.

MOBILE MEDICAL SOCIETY.

(Reported by W. D. Bizzell, M. D.)

Addendum and Corrections.—In the report of the discussion on Diphtheria (see September No.), Dr. Gaines did not quote from Rokitansky, as reported, but from Reindfleisch, who *does not* maintain that a histological difference between the two membranes exists, but expresses himself as follows: "The physician has every reason to keep the two varieties (laryngo-tracheal and pharyngeal croup) apart. In their clinical characters, in the dangers to which they expose the patient's life, and, above all, as regards their treatment, they differ so essentially that in spite of their *anatomical identity*, on which it is my business to insist, I should feel bound to oppose any attempt towards a clinical fusion of the two diseases."

July 10th. **Ipecac in Dysentery.**—Dr. E. H. Fournier stated that in the last few weeks he had been enabled to enlarge his experience in the treatment of dysentery by ipecac. One case, a colored woman, who had not been under the care of any physician, had been suffering about a month. There was great tenesmus straining and constant desire to go to stool, together with the characteristic discharges, frequently repeated. Gave 20 grains of ipecac, preceding it by a full opiate in the morning, and repeated at night. Next day she was entirely relieved of the griping, straining, &c., evacuations larger and fœcal, and she

expressed herself as feeling well. There was still, however, considerable tenderness on pressure over the abdomen. She had no further treatment till the third day, when, there being some tendency to relapse, she had some slight treatment. This was followed by tonics, and she soon left the Hospital cured.

He also related a second case, in the person of a young Frenchman, also an inmate of the City Hospital, who had been suffering from dysentery nearly a month—sometimes better and sometimes worse. On admission, he was suffering a great deal, with all the symptoms of acute dysentery. Treatment same as that detailed above, and followed by equally satisfactory results.

Dr. Fournier remarked that he sometimes gave the ipecac combined with opium, in the proportion of 3 or 4 grains of the former to 1 of the latter. He always administers the ipecac in pill or bolus, if the patient can swallow it. He prefers this method to giving the powder in substance, as it is less liable to nauseate. He is treating at this time some cases of chronic diarrhœa with pills containing small doses of ipecac and opium, and apparently with the effect of gradually benefiting the patient.

Dr. Read had used the ipecac treatment in a number of severe cases recently, and with the happiest results. One case in particular—a young physician at State Line, Miss., who in alarm had sent for him to attend him, the disease having appeared in that locality in rather a violent form, with several fatal cases. The patient was cured with three doses of ipecac, 10 grains each, preceding each dose with an opiate.

Dr. F. A. Ross (the President) remarked that it was a curious fact of medical history, that though ipecac was first introduced to the profession as a remedy for dysentery, and was very extensively used in Europe and elsewhere for this purpose, yet from some cause or other it gradually fell into disuse in this connection; and now following a very long period of almost complete abandonment, we are again hearing of its employment frequently in this disease. He said that pills were undoubtedly the best way to administer the remedy, as less likely to induce nausea and vomiting, which would frustrate the plan of treatment.

Typhoid Fever.—Dr. Oliphant reported a case of typhoid fever lasting twenty-four days, and followed by a good recovery. There was nothing of particular interest connected with the history or treatment of the case, and he only reported it because he had been informed that typhoid fever was a rare disease in Mobile. He then asked Dr. F. A. Ross what his experience had been in regard to this question.

The President replied, that typhoid fever was a disease unheard of in the South long after the North had been frequently

scourged with it. According to his recollection, the first case reported as occurring in the South was in 1840, by a physician at Vicksburg, Miss. At the time of this publication Dr. Ross was a student in the hospitals in Philadelphia, under the late Dr. Gerhard, and well remembers that gentleman calling in question the accuracy of diagnosis in the case reported at Vicksburg. Prof. Gerhard then gave it as his opinion that if typhoid fever ever made its appearance at all in the South, it would be a mild disease as compared with the same malady further North. Dr. Ross soon after this settled in Mobile, and though he watched closely, it was not until 1843 that he saw a case. And the number of genuine well-marked cases seen by him during his entire residence in Mobile would not amount to more than a dozen cases.

Peritonitis—Abscess of the Liver.—Dr. Smith reported the following: A young man who had been under Dr. Smith's care for chronic diarrhœa several months since, afterwards placed himself in charge of another physician, who, as the young man reported, had cured him of the diarrhœa. Reported to have been complaining of pain in his back and abdomen, and for which he had been treated by this same physician during a period of six or eight weeks. Symptoms present when Dr. Smith again took charge were: vomiting and great prostration, together with more or less tympanitis and intense tenderness over the abdominal region. Diagnosis: Peritonitis. Treatment: A blister over the abdomen, 8 by 10 inches, a purge, and rather full doses of morphine. On the day following, the blister had drawn well, bowels acted, vomiting ceased, and he expressed himself as feeling much better. Vomiting, however, soon returned, and afterwards became stercoraceous. Pulse, which had remained since the attack at 140, gradually went higher. The symptoms grew continually worse, and he died.

Post Mortem—Assisted by Dr. W. H. Ross.—The abdominal cavity was filled with flaky lymph and pus, the result of the recent peritonitis. Six inches above the ileo-cœcal valve there was a sharp constriction in the calibre of this part of the ileum. On the posterior aspect of the right lobe of the liver there was found the partially empty sac of an abscess about the size of an orange. Dr. Smith said he had no doubt that the rupture of the walls of this abscess, and the pouring out of its contents, had set up the peritonitis which had proved fatal.

Dr. W. H. Ross stated that in the *post mortem* detailed above, in addition to the condition already detailed, he had noticed a thickening of the walls of the intestinal canal.

President F. A. Ross remarked that this case illustrated a

typical case of abscess of the liver as it occurs in warm climates. First, a protracted bowel trouble, attended, in all probability, with ulceration, as the constriction found on *post mortem* would seem to prove; subsequently, pain over the region of the liver and reflected along the spine; then the abscess, followed by death.

August 7th.—**Abscess of Liver.**—Dr. E. H. Fournier reported a case of abscess of the liver. With the assistance of Dr. Gaines, the tumor was aspirated and opened between the 8th and 9th ribs, and about a quart of dark pus evacuated.

August 21st.=There was no more discharge through the opening made by Drs. Fournier and Gaines in the above case after the first emptying of the abscess; but the cavity gradually refilled, and when, from the gravity of the symptoms, Dr. Fournier began to think seriously of again opening it, the abscess burst spontaneously, emptying its contents into the intestinal canal, by which channel about a gallon was discharged at once; in addition to which more or less matter continually drained away through the same channel. The patient's strength is rapidly giving away, and Dr. Fournier does not think he will live many days. The Doctor remarked, that while at first sight this method of emptying the contents of this class of abscesses—namely, through the intestinal tract—would seem favorable, clinical facts proved the contrary, and that notwithstanding the violent cough and distressing symptoms, there was more hope for a patient when the abscess pointed towards a bronchius and discharged itself through the lungs.

NASHVILLE MEDICAL SOCIETY.

(Reported by Secretary, R. D. Winsett, M. D.)

August 3rd.—Dr. A. Blitz reported the following interesting cases:

Removal of a Small Piece of Rock from the Cornea.—Mr. J. B—— was brought to his office May 30th by Dr. Draughan, from whom he learned that the patient, while blasting in his yard (making a cistern) had the misfortune to have the blast go off prematurely, injuring him severely, and filling his eyes with powder and dust. Dr. B. saw the case three or four days after the accident. On examination found imbedded in the cornea of each eye a small piece of rock, about half the size of the head of a pin. In the right cornea the foreign body was imbedded immediately over the centre of the pupil, while in the left it stuck a little over the lower and outer edge of the pupil. The

ocular conjunctiva was studded with powder specks. The inflammation had nearly subsided, but left the eyes very sensitive.

The patient being placed in the recumbent position, Dr. B. proceeded (without an anæsthetic) to remove the pieces of rock from the cornea. He had very little trouble in removing the piece from the left one, but in the right cornea it was more deeply imbedded, having penetrated Descemet's membrane. At the slightest touch it went through the cornea into the anterior chamber, but fortunately not more than a line from the edge of the wound on the posterior surface of Descemet's membrane. He now entered through the wound a fine cataract needle, strongly curved at its point, and, pushing it through the wound, brought the point behind the foreign body; then slightly turning the needle on its axis, he lifted the piece of rock out of the anterior chamber on the anterior surface of the cornea, from whence he removed it with the forceps. He directed a solution containing about three grains of the sulphate of atropia and two grains of sulphate of zinc to the ounce of water, to be dropped into the eyes three or four times daily, and cold applications to the closed eyelids. No bad symptoms followed. In the right eye a small white speck about the size of a pin head remains, slightly impairing vision in that eye, while in the the other sight is perfect.

Lipoma on Eyeball.—Bella W——, aged 18 years, came to Dr. B.'s office June 2nd, to consult him with reference to her eye. On examination, he found a lipoma about the size of a large pea, oval-shaped and somewhat flattened at its surface, on the left eyeball—one-half of the tumor being situated on the sclerotic, and the upper half on the lower and outer part of the cornea, reaching up to the margin of the pupil. He prevailed on the patient to have the growth removed immediately, to which she consented. He called in Dr. Sandek and Mr. Menees, a medical student who happened to be handy at the time, to assist him. The patient declared her determination to have the operation performed without an anæsthetic.

The patient being in the recumbent position, Dr. B. applied the speculum to keep the lids apart, and with a Graefe's linear knife transfixed the tumor, the cutting-edge being directed towards the centre of the cornea, from which he cut the upper part of the tumor. He then dissected the lower half of the growth from its connection with the sclerotic and conjunctiva. The loss of conjunctiva was considerable, and in order to cover it, a flap was taken from the conjunctiva of the opposite side of the eyeball. The section was $\frac{1}{4}$th inch in breadth, and $\frac{3}{4}$ths inch in length, with its base at the raw surface and its apex towards the upper part of the eyeball. Only the conjunctiva

was used, the sub-conjunctival tissue not being disturbed. He now turned the flap, which remained connected with the conjunctiva at its base, to fit over and cover the denuded part, and stitched it to the surrounding conjunctiva. The gap made by the removal of the flap was brought together with three or four fine sutures. Cold water applications were ordered to the eye. There was very little hyperæmia, only a slight chemosis of the cornea, which soon passed off. On the third day after the operation he removed some of the sutures, and the balance on the fourth. When last seen, the eye looked very natural, with the exception of a slight corneal opacity corresponding to the base of the corneal half of the tumor.

MEDICAL AND SURGICAL SOCIETY OF BALTIMORE.

(Reported by G. L. Wilkins, M. D.)

Sept. 9.—**Transfusion** was the subject of a very interesting paper by Dr. A. B. Arnold. He sketched the history of the operation, detailed the leading experiments and views of authors down to a very recent date, defined some of the terms in common use with reference to transfusion, described the methods of operating as laid down in the books, pointed out some of the dangers and difficulties of the operation; and after mentioning the conditions for the treatment of which it has been particularly recommended (post partum hemorrhage, asphyxia from poisoning by coal gas, anæmia, &c.), he strongly urged the feasibility of resorting to transfusion in certain zymotic diseases. He proposes first to bleed the patient to a given extent, and then to transfuse blood from a healthy subject. This plan, he thinks, would serve to wash out, in a measure, the poisoned or diseased blood, while at the same time healthy blood is being substituted. He believes this theory not to be impracticable, but, on the contrary, one altogether worthy of a trial.

In cases of acute anæmia, when stimulants, counter-irritation, electricity, artificial respiration, etc., fail to revive the patient, as it is not always possible to practise transfusion at the moment, *auto-transfusion* (as practised by French physicians) suggests itself. This consists in placing the patient almost horizontally, with the head low and the feet elevated—pressure being at the same time made on the extremities in such a direction as to cause an increased amount of blood to flow towards the heart. To accomplish this latter purpose the more effectually, Dr. A. suggests the application of Esmarch's bandage to each of the extremities.

Dr. Cathell remarked that he resorted to auto-transfusion a

few days ago with the effect of temporary resuscitation. The patient, to whom he was called in consultation with Dr. Russell, had been suffering with ileus for several days, and was fast approaching death. Dr. C. injected a gallon of warm water, which, however, was immediately discharged, without affording any relief. While the doctors were in consultation in an adjoining room, they were hastily summoned to the patient, in whom syncope had taken place; respiration and heart action had ceased, and he was apparently dead. Auto-transfusion was immediately practised, and, in addition, a strong man was directed to rub the extremities in such a way as to force the blood towards the heart. During this procedure, an epileptiform convulsion occurred; a gasping respiration was established, and the patient revived sufficiently to converse rationally, and even to sign his will, which had been prepared before the syncope took place. Half an hour afterwards, syncope recurred and the patient died.

RICHMOND ACADEMY OF MEDICINE.

Sept. 2.—**Cholera.**—Dr. F. B. Watkins reported the case of a lady, aged about 60, previously in ordinary health, with the exception of an acute bowel trouble, who was suddenly seized with all the symptoms marking a severe attack of cholera—a profuse rice-water stool, pinched features, washerwoman's skin, the usual cramps, and vomiting and retching, followed by complete collapse, absence of radial pulse, etc. The peripheral capillary blood vessels, in cholera, are empty, while the internal organs are congested; a large quantity of blood is rapidly lost by the frequent serous evacuations, and the patient dies of cold. Hence in treatment, heat should be applied, while the vital forces are supported by stimulant doses of quinia, opium, camphor, etc. Mustard plasters might as well be applied to a corpse to excite vital action as to a patient in collapse. His patient, treated in the manner indicated, had no other bowel action. Prostration, however, was extreme. Throughout, the symptoms corresponded with those of *cholera*, and not cholera morbus. While this case does not awaken suspicion of the lurking existence of an epidemic influence, yet he could not appreciate any reason stated in the books why it should not be classed as one of *cholera*.

Dr. J. S. Wellford, about a week before the occurrence of the above case, was called to a young lady, who had been suffering from serous diarrhœa, brought on by imprudence in eating. He found her with cramps of the lower extremities, absence of radial or popliteal pulse, and rapidly passing into the stage of collapse. He believes if several such sporadic cases as these two

were brought together in one house, under favorable circumstances, sufficient choleraic poison would be developed to cause an epidemic. But whether cholera results from an "epidemic influence," or be caused by emanations from choleraic dejections, or occur sporadically, the symptoms are yet the same, and require much about the same treatment. He thinks calomel the best remedy; opium checks the secretions, and hence is deleterious; acetate of lead is the best astringent. The bowel discharges in cholera are due to a direct transudation of the altered blood through the mucous lining, resulting from atony of the intestinal tract. Hot air baths, and the mustard applications, condemned by Dr. Watkins, help to maintain a proper temperature, and tend to re-establish peripheral circulation.

Dr. R. T. Coleman thinks cholera virtually a congestion trying to relieve itself. Nature is assisted in its *vis medicatrix* by large doses of calomel. Opium, too, may be given, but not by the mouth; for, when re-action occurs, the large quantities in the stomach unabsorbed, would be rapidly taken up, and cause death by opium-poisoning. The use of morphia hypodermically is most rational. It is bound to be taken up by the circulation at once, and to produce its specific effect. Calomel, quinia, acetate of lead internally, and blisters over the abdomen are the remedies to be mostly relied on.

Dr. J. Grattan Cabell held that such cases as have been reported here to-night should be classed as cases of true *cholera*. True, there is nothing *Asiatic* about the causation of these two cases, but the same kind of causes may unfortunately exist here as in Asia, while the symptoms of the attacks, and he believes, the pathological conditions are the same in both cases.

Dr. Wellford remarked that the symptoms in the two cases reported to-night presented themselves with great suddenness; whereas, in true cholera there is a precedent diarrhœa.

Dr. O. A. Crenshaw remarked upon his experience in a cholera endemic some years before the war, on a farm in the Eastern section of the State. During the endemic, of about 100 cases, 32 died.

Dr. O. Fairfax thinks dilute sulphuric acid a remedy of great value in cholera. It should be administered frequently in doses of 30 drops, or in smaller doses until the stomach can tolerate the larger.

Dr. Edwards mentioned a case seen with Dr. Bright last summer, 1874, which presented all the symptoms of true *cholera*, but there was no epidemic. He also mentioned a case of *cholera morbus* seen with Dr. Parker during the same season. Both ladies died. He used these cases to draw the diagnostic dis-

tinctions between the two diseases. He agrees with Dr. Cabell in his remarks. A precedent diarrhœa had been mentioned in connection with cases reported to-night. He thinks authorities will soon come to recognize that cholera may prevail in this country without any connected history of importation. Too many *sporadic* cases are occurring in the practice of physicians in this country to prevent an early prominent mention of them in the books.

AMERICAN PHARMACEUTICAL ASSOCIATION.

(Communicated by T. Roberts Baker, Richmond, Va.)

The 23d annual meeting of the American Pharmaceutical Association was convened in Boston, Mass., on Tuesday, Sept. 7th, at 3 o'clock P. M. This was the largest and, probably, the most profitable meeting, in a scientific sense, that the Association ever held. Some 300 members were present, comprising delegates from all the Pharmaceutical Colleges and Associations in the United States and Canada. The Southern members especially were very cordially received by the Boston pharmacists and citizens generally, and the visiting members, with the ladies accompanying them, were handsomely entertained with a series of receptions, dinners and excursions.

The officers elected for the ensuing year were as follows; President, Prof. G. F. H. Markoe, of Boston; 1st Vice President, Dr. Frederick Hoffman, of N. Y.; 2d Vice President, T. Roberts Baker, of Richmond, Va., 3d Vice President, C. F. G. Meyer, of St. Louis; Permanent Secretary, Prof. J. M. Maisch, of Philadelphia; Treasurer, Chas. A. Tufts, of Dover, N. H.

The retiring President, Prof. Diehl, of Louisville, Ky., in his annual address, alluded to the pharmaceutical novelties which had claimed special attention since the last meeting, among which was jaborandi, which was very fully expatiated upon.

The report of the Executive Committee showed an average membership of over 1,000, and presented interesting statistics in connection with the history of the Association, its record of necrology, &c. It appears that this is the largest scientific body on this continent, and it is stated in Dr. Diehl's address that pharmacists have contributed more to science than any other class.

The Secretary's annual report contained many important recommendations—some with regard to legislation by the courts and legislatures of States on the subject of pharmacy, and others with regard to arrangements for the reception of pharmacists from foreign countries who would attend the next annual

meeting to be held in Philadelphia during the progress of the great Centennial Exposition in 1876.

An unusual number of scientific papers and volunteer essays were read at the different sessions of the meeting, and between two and three hundred new members were elected. The proceedings were all accurately recorded by an expert stenographer, who is regularly in the employ of the Association, and will, in a few months, appear as usual, in book form.

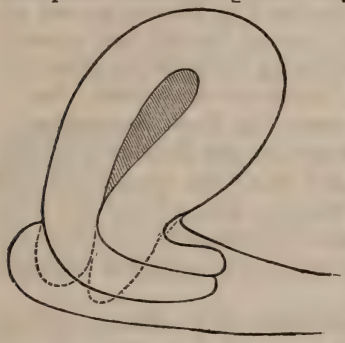
We have not space here to notice any of the essays and scientific papers read, some of which abound in new and valuable results of patient investigation, forming valuable contributions to chemical, pharmaceutical and therapeutical science; but, in passing, would remark upon an essay by Prof. Remington, of the Philadelphia College of Pharmacy, on the Solubility of Different Kinds of Pills, in which the following conclusions had been arrived at by actual experiments: First, That the plain pill without any coating, was the most soluble, and secondly, that of all the coated pills those coated with gelatine were the most insoluble.

The report brought in by the chairman of the Richmond delegation from the Richmond Pharmaceutical Association, on the subject of reform in writing prescriptions, unusual doses, &c., which had previously received the sanction and co-operation of the Richmond Academy of Medicine, was very favorably received, and, in view of the fact that the subject was one of too much importance to risk any hasty legislation upon it, the whole subject was referred to a committee, to be privately selected by the President, which committee shall report at the next meeting of the Association in Philadelphia.

Analyses, Selections, &c.

Obstructive Dysmenorrhœa.—In a clinical lecture delivered by Dr. Thomas A. Emmet at the Woman's Hospital, New York, he said: "I shall refer now particularly to what is known as obstructive dysmenorrhœa, or dysmenorrhœa in which there is some mechanical obstacle to egress of the menstrual blood. There are of this form of the disease two principal varieties; first, that in which the obstruction is found at or below the vaginal junction; and secondly, that in which the obstruction is in the body of the uterus. The first class is congenital, and is produced in the following way: When the uterus is becoming developed, the growth of the neck is much more rapid than the growth of the body, and as a result, the cervix passes down to

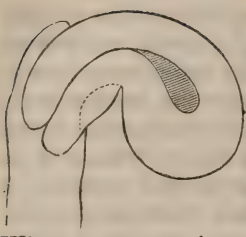
the axis of the vagina, and then slides along the posterior wall, causing a flexure at the union of the body with the cervix. Why this happens in some cases and not in every case is not easily understood, but the predisposing causes may be considered, I think, to be laxity of the uterine tissue and elongation of the neck. When menstruation occurs in this class of cases, dysmenorrhœa occurs early in the flow, but as the flow progresses the pain ceases." [This may be understood by this diagram.



At the beginning of menstruation, the flexure is as you see it here; but as the congestion of the organ increases, the cervix becomes thickened, shorter and straighter from the engorgement, as shown in the dotted lines. The patient now on the table is an example of this variety of disease. When the finger is carried into the vagina, and then anteriorly to the cervix, the flexure is readily detected, and when the sound is introduced it demonstrates it still more clearly. The treatment of the case consists in relieving the obstruction by dividing the cervix posteriorly. When this is done, the circular fibres are cut, and the longitudinal ones gradually retract, and the canal becomes straight.

The advantage of a division of the cervix posteriorly is that there is less risk from bleeding, and when the incision has healed there will be no gaping of the edges, as the flaps are kept sufficiently in contact by the lateral walls of the vagina. The manner of performing the operation is to hook a tenaculum into the os, and draw the cervix forward, then, by means of the scissors, slit the cervix back as far as the vaginal folds. These folds show the junction of cervix and body, and serve as a guide in the operation. There is no danger of cutting the circular artery if this precaution is attended to, and there is also no flexure in the uterine canal. After the operation, a tampon should be applied, for, although no bleeding may appear then, it may appear some time subsequently. The incision is kept open by drawing the point of a sound through the angle of the wound. Daily dressings are applied to keep the edges apart. It is a very important point in the after-treatment that the patient be kept in bed until the parts have healed.

In reference to the second class of obstructive dysmenorrhœa, which I have already referred to, the flexure takes place in the body of the uterus, and is the result of disease, either a localized metritis or the effect of a fibroid tumor. The body be-



comes bent on itself, as shown in this diagram, and an increase of congestion increases the flexure. When the disease has existed for a long time, the fibres, at the point of flexure, undergo fatty degeneration from pressure, and absorption takes place, leaving as a result a permanent deformity, as in caries of the vertebræ. When menstruation takes place in this class of cases, there is not much pain in the early stages, but as the flexure increases with the engorgement, the pain becomes worse, and continues to the end.

The cure of this class of cases is very tedious. No operative procedure should be undertaken till all tenderness at and around the uterus has been removed. It may take a year or longer to prepare the patient, and this should be done by vaginal injections of hot water, together with appropriate treatment to the cavity of the uterus, such as Churchill's tincture of iodine, or the impure carbolic acid. When disease can no longer be detected, it may then be judicious to divide the cervix posteriorly, as in the former case, and then carry a uterotome up and incise the uterus at the point of stricture, so as to leave a direct channel in the inside of the uterus.

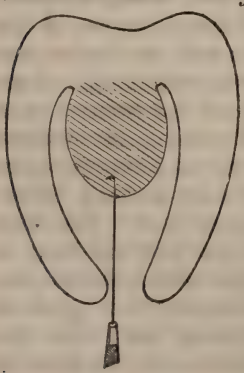
Dr. Emmet proceeded to operate upon the patient in the manner he advised [in reference to the first case], cutting the cervix posteriorly, and leaving a tampon in the vagina to guard against bleeding. After two weeks the wound had healed, leaving a very free channel for the escape of menstrual blood.—*N. Y. Med. Journal*, August, 1875.

Treatment of Uterine Fibroids.—At a clinic by Dr. Thomas Addis Emmet, at the Woman's Hospital, New York, he said: The case which is now before you is one of fibroid tumor of the uterus, affecting the posterior wall, and will be better understood by this diagram. It is now fourteen years since I accidentally found that, by making traction on a fibroid, it could be removed without any attempt at enucleation, and this led me to investigate the matter from a point of view entirely different to that which I formerly held. The first case which I removed in this way was from a patient in this hospital; she had a fibroid distending the uterus to the size of full term of pregnancy, and also extending down into the vagina and filling it. A portion of the mass in the vagina was beginning to slough, and it was



my intention to remove this putrescent portion in order to prevent blood-poisoning. For this purpose, I passed a slip-knot around the growth as high up as possible in the uterine cavity, and made traction with the intention of preventing hæmorrhage. I cut away for some time with the curved scissors, but still found the vagina as much distended as ever with the growth, and on examining the uterus found it considerably reduced in size. I continued removing the tumor piece by piece, when accidentally I cut the ligature. To my astonishment, there was no hæmorrhage, and I kept on pulling down portion after portion with the tenaculum till a pedicle not thicker than the index finger was reached. Previous to the operation, I had supposed that the greater part of the tumor was buried in the uterine tissue, but, from the obstruction in the vagina, was unable to make out its attachments with my finger. After the operation, the uterine cavity measured only five inches in length. Not more than an ounce of blood was lost during the operation, and the patient recovered without a bad symptom. ****

It is my conviction that fibroids become pedunculated only when directly influenced by the force of gravitation, which causes uterine contraction. I do not believe that they have a capsule proper—the only capsule being the mucous membrane of the uterus, covering their projection—the only line of demarkation between them and the uterine wall being the difference in density of the respective tissues. A very important change takes place in the muscular fibres of the uterine wall immediately over the tumor, from pressure. It seems to be a species of atrophy or degeneration, and is apparently the result of the long continued pressure of the tumor. This may be demonstrated by placing the hand over the uterus when in active contraction, and it will be found that a depression exists corresponding in extent to the tumor beneath. If you look at this diagram you will see my



view more plainly. If the contraction is prolonged, the extent of the depression will lessen just in proportion as the tumor may be forced into the uterine canal. About the circumference of this neutral space of uterine tissue, forming the outer wall of the tumor, the muscular action is more marked than at any other point—the greatest action being naturally at the seat of irritation. This neutral surface, when thus encircled by a contracting band, continues to be crowded in as rapidly as the space below becomes vacated, and the tumor peduncu-

lated in proportion to its advance into the uterine canal. It is not yet clear to my mind whether or not any real displacement of this neutral surface takes place, but I am rather inclined to the view that a ridge is formed around by the damming up, as it were, of the contracting muscular wall, the neutral space acting as an obstruction.

Now, when traction is made on a tumor situated as you see here, the uterus closes in behind it, and in this manner we can account for the fact that, before making the traction, the base of the tumor may be very broad, and after we remove it piecemeal and get down to the uterine wall, we find a pedicle not thicker than a lead pencil. A familiar example of this fact may be made by supposing the mass to be embedded in India rubber, the contractility of the rubber being sufficient to close in as the mass becomes removed, and fill up what would otherwise be a cavity.



As regards the histology of uterine fibroids, **** I am of the opinion that the matter requires more thorough investigation. I think, also, that when we have a subperitoneal fibroid, we have a prolongation of it into the uterus; but whether this is true in every case must be verified by future observations. To illustrate this fact, I will mention a case in which I assisted another physician. An examination of the uterus showed it to contain a large fibroid, presenting through a well-dilated os; the lower portion of the attachment was two inches within the canal on the anterior wall. The chain of the *écraseur* was passed around the growth, but slipped off.. It was re-applied, but seemed to include a larger extent than previously; this was due to the presence of two fibroids—one overlapping the other. As soon as the *écraseur* had cut through the bite which it had taken, I passed my hand within the uterus, and attempted to break down and tear away the remains of the tumors, as the hæmorrhage, which had been excessive since the beginning of the operation, increased as the operation advanced. As I passed my hand over the surface of the uterus, I found a subperitoneal tumor, and, in the attempt to break down the tumors on the inside, violent uterine contraction came on, and I felt the canal encroached upon by a mass which I attempted to enucleate with my thumb-nail. The capsule split, and this mass escaped so suddenly from its bed that I feared I had ruptured the uterus. On placing my hand over the abdomen, I found that the subperitoneal tumor had disappeared. The uterus now contracted

uniformly, whereas, before it had been doing so irregularly, and all hæmorrhage soon ceased after the removal of the remaining portions of the growths. The case ultimately recovered, though slowly, from the great loss of blood which took place.

Another case which demonstrates this point more clearly, took place some years ago in this hospital. A small tumor, partially pedunculated, was discovered near the fundus, and on the outside of the uterus another tumor was detected, which was thought to have no connection with the one within. Inasmuch as the small intra-uterine mass could not be easily seized, it was slit open and allowed to disintegrate. The patient did well for a week or ten days, but at the end of that time, while being syringed by the nurse, complained of a sharp pain over the lower part of the abdomen. The nurse noticed that the injection did not return into the bed-pan, and, dreading some accident, sent for me. A few days afterwards, the patient died from peritonitis. At the autopsy, it was found that the subperitoneal tumor was displaced, and rested behind the uterus. Where the tumor was attached, there was found an orifice about an inch in diameter, communicating with the uterine canal. This orifice corresponded also with the seat of the intra-uterine tumor, which had completely disintegrated. The obvious explanation of the case is, as I take it, that when the disintegration of the tumor within the uterus had taken place, the periphery of the outer tumor became involved and loosened from its attachment, and the injection easily displaced it, aided, in all probability, by its own weight.

Now, in regard to treatment. When we can make traction, it matters not as to the thinness of the outer wall, if there is only sufficient uterine tissue left to contract by exciting it. It is plain, however, in a case like this (Fig. 3), where the wall is very thin, that we can accomplish nothing; but if there is a sufficient amount of the wall left, the space will be closed up as soon as the mass is withdrawn. This procedure has the great advantage of being safer than any other, and is applicable to every case where a prudent operator would feel justified in attempting enucleation by any method. During an experience of eight years, I have lost but one patient, and that was, as I have stated, where I cut into the tumor and allowed it to disintegrate.

When a tumor is at or near the fundus, ergot acts beneficially in causing uterine contraction to pedunculate the tumor. By cutting the cervix the force of gravitation can be brought to produce a similar effect. But there are many cases where gravity cannot act, as in fibroids situated low down in the uterus, and where, from the size or other causes, uterine contraction cannot be secured. It has been my custom, in cases where the

tumor was larger than a pigeon's egg, to limit myself to controlling hæmorrhage, and aiding the uterus in forcing the tumor into the cavity, and when it had projected sufficiently, to remove by traction. *** But it may be that, with an increasing experience, cases which I now hesitate to use traction on, may be beneficially treated in this way. I am very much opposed to the practice of separating the tumor from its capsule before withdrawing it, from the fact that a larger surface is left to imperil the patient by septicæmia; but I think it is still more dangerous to cause disintegration of the mass, for when this is once started it is impossible to control it.

After all *débris* has been removed, the cavity should be washed out with very hot water. *** It removes all detritus, it excites uterine contraction, and, if it is prolonged, it acts as an astringent upon the capillaries of the surface. After the injection, the application of Churchill's strong tincture of iodine not only increases the contraction, but acts as an hæmostatic if there be a necessity. If oozing continues, it may be necessary to introduce a pledget of cotton saturated with glycerine, or, in case slight hæmorrhage continues, a tampon of cotton soaked in a strong solution of alum may be employed. The vagina should also be tamponed with a similar dressing. On the second day I remove the tampon, and, if there is no further hæmorrhage, dispense with all dressings, and continue the frequent injections of hot water. The patient must not be allowed to leave her bed till the cavity has been filled up, and discharge from the uterus ceased.

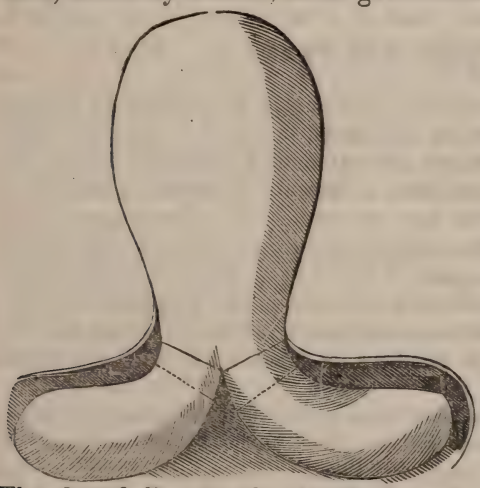
I consider persulphate of iron an unsuitable remedy to apply to the cavity of the uterus for the arrest of hæmorrhage, for several reasons. It possesses in itself no styptic properties, but merely coagulates a mass of blood, which then acts mechanically. The blood thus coagulated is so changed in its properties that it undergoes decomposition in a few hours, and acts as a septic cause. Again, it acts as a local irritant, and is removed only by suppuration.—*New York Med. Jour.*, July, 1875.

[Dr. Emmet has published since this lecture a fuller monograph on this subject.—Reprint from Trans. Med. Soc. State of New York, 1875.]

Hypertrophic Elongation of the Labia of the Cervix Uteri —Amputation—Recovery.—Dr. M. Whitehead, Salisbury, in the *Trans. Med. Soc. N. C.*, 1875, reports the following case: Mrs. C., married, aged 39 years, mother of five children, the youngest three years old. Soon after "getting up" from the last confinement, she suffered from pain in her back and loins, a sensation of dragging and weight about the pelvis, fatigue from

walking, leucorrhœa and inability to lift the least weight. She had used astringent vaginal injections without benefit. About a year ago, her womb "came into the world" whenever she stood up or took the least exercise; for some time she could replace it when lying on her back, but for the past four months she had not been able to do so.

On examination, the uterine neck protruded from the vulva, with the anterior lip curled up on the pubis, and the posterior on the perineum, presenting the appearance of the snap-dragon flower. The body and neck of the uterus measured over four inches, and the hypertrophied labia quite 1½ inches, and were fully ¾ inch broad. There were two or three abrasions on the labia, caused by friction, which gave considerable pain in walking or sitting. The accompanying cut, taken from Byford, gives some idea of the extent of the elongation.



December 9, 1874, assisted by Drs. Summerell and Caldwell (ether being administered to complete anæsthesia), Dr. W. cut away the hypertrophied labor, performing Sims' operation, not being prepared to operate with the galvano caustic wire. The dotted lines in the sketch show the point of amputation. The hemorrhage was very great for a time, requiring the actual cautery for its arrest from the posterior stump. As soon as all bleeding ceased, the flaps of mucous membrane were drawn over the stumps and secured by silver wire sutures, a piece of lint wet in a weak solution of persulphate of iron applied to each, the uterus replaced well in position, and the vagina was packed lightly with cotton lint. After giving hypodermically half a grain of morphia, she was placed comfortably in bed. Daily syringing of the vagina with a tepid weak solution of carbolic acid, an occasional dose of morphia hypodermically, with full doses of quinine and rest in the horizontal position, constituted the principal part of the after-treatment.

When the sutures were removed, a large portion of the stumps had healed, but on the part not healed, exuberant granulations sprang up, requiring occasional applications of nitrate of silver.

When the patient was first permitted to walk, (owing to the relaxed condition of the vagina and the ligaments, due to long continued displacement of the uterus) the fundus was disposed to fall back into the concavity of the sacrum. A properly adjusted Hodge's open lever pessary, worn until the tonicity of the parts was restored, removed this difficulty. The operative and after treatment in this case accomplished all that could be desired. The uterus now measures 2¾ inches.

In an active professional career of 30 years, with no small amount of gynæcological practice, Dr. W. does not remember to have seen a similar case reported by any physician in North Carolina.

Book Notices, &c.

Paralysis from Brain Disease in its Common Forms. By H. Charlton Bastian, M. A., M. D., F. R. S., F. R. C. P., etc. With illustrations. New York: D. Appleton & Co., 1875, 12mo. Pp. 340—xv. (For sale by Messrs. West, Johnston & Co., Richmond, Price $1.75.)

These are the revised lectures which first appeared in the *Lancet*, and which have attracted so much attention and commendation. We are glad they are presented in book form by publishers in this country, who always do their part well, for there is no other one work yet published that can take its place. It contains the most advanced views clearly expressed, and, withal, is the best book on the subject in the English language. It is of service, not only to specialists—indeed, it is of special value to the general practitioner, and as such, ought to be in the library of every physician. It is based upon a large clinical experience—especially in the National Hospital for the Paralyzed and Epileptics—and upon a perfect familiarity with the literature of the subject. We scarcely know which portion of the work is the best, unless, perhaps, we were, with the writer in the *New York Med. Jour.*, to direct particular attention "to the chapter on the difficulties of diagnosis in the apoplectic state, and the means of distinguishing, as far as may be, between the coma resulting from effusion, injury, narcotic poisoning, intoxication, uræmia, epilepsy, etc. Of equal value is the chapter on the differential diagnosis of embolism, thrombosis and hemorrhage."

Transactions of the South Carolina Medical Association, Charleston, April 13–14, 1875, Dr. Jas. McIntosh, Newberry, *President* [the President serves two years]; Dr. H. D. Frazer, Charleston, *Secty.* Pp. 272.

We reported the proceedings of this session in our May No., 1875, and in the July No. we presented Prof. Parker's description

of his useful *apparatus for anchylosis and cicatrices of the fingers, resulting from burns, &c.* Omitting then any further mention of the proceedings as such, we come first to the address of the President, Dr. McIntosh, on *Ergot—Its Hypodermic Use in Hemorrhage, especially Uterine Hemorrhage.* This paper, from its value, must take rank among the authoritative monographs on the subject, being, in great part, the record of personal experience with the drug so administered. We shall furnish our readers with a full synopsis of it at our first opportunity.

The *Historico-Pathological Sketch of Bright's Disease* is also a valuable paper of 135 pages in length—it being the report of a committee (Dr. J. F. Geddings, Charleston, Chairman). The conclusions of the report—based upon personal observation and study of 64 cases of *diffuse nephritis*, and also upon a review of the best authorities upon the subject—are, (1) that the term includes at least four distinct pathological conditions, which are (2) passive hyperæmia and sclerosis, catarrhal nephritis, diffuse nephritis, and amyloid degeneration; (3) that though these conditions are often blended, they also often occur separately, and may be diagnosed during life, and the special incidental lesions demonstrated after death. The Committee need not "deprecate a too severe criticism" of their labor, which has given a reliable resumé of the present status of our knowledge of the pathology of Bright's disease.

The report of the Committee on *Puerperal Convulsions* (Prof. J. Ford Prioleau, Charleston, chairman) covers 48 pages, but is wanting in conclusions drawn from personal experience, or that are sufficiently practical. About $\frac{7}{8}$ths of the report is taken up with statements of the various theories which have been advanced to account for the production of convulsions, and exhibits an immense amount of learning and research into the literature of the subject. But the deductions are not systematically arranged; hence, one arises from the casual perusal of the report confused as to what he has just read. At least, the practitioner derives no assistance in trying to decide the vexed question as to the best mode of treatment, unless we except the general statement: "Holding such strong opinions [that the anæmia which generally accompanies pregnancy is the *predisposing* cause of eclampsia—the sudden arterial anæmia of the encephalon being the immediate cause], we must be adverse to the use of the lancet." We had thought that, if one fact in practice be established beyond another, the experience of physicians generally placed the lancet right next in importance to the anæsthetic plan of treatment (chloral, chloroform, &c.), or at least, alongside with the morphia plan. There need not be hyperæmia of the brain to justify the use of the lancet in eclampsia, as there are other good reasons why it may be used in appropriate cases.

Dr. S. Baruch, Camden, reports a case of *Fibroma of Upper Maxilla* removed by excision. Tetanus developed 14 days after the operation, while the patient was otherwise improving, which was successfully treated by chloral and bromide of potassium—the second case, by the by, thus successfully treated by Dr. Baruch. Afte

recovery from the tetanus, pernicious remittent fever developed, from which the patient died, though the surgical operation proved successful.

Dr. Baruch also reports a case of *Acute Articular Rheumatism, with Cardiac Complications and Hyperpyrexia, treated by Cold Bath, Ice Bags and Iodide of Potassium in large doses.* The patient was taken sick Feb. 20th, and was discharged cured April 16th—nearly 7 weeks under treatment. Comment is unnecessary in speaking of this as an illustrative case of the *value* of cold applications in the treatment of acute rheumatism, when reminded of Watson's prescription of 6 weeks, not to refer to still better prescriptions since the time when that honored father in medicine wrote this prescription. We are not hydropathic, *except in very rare cases*, nor homœopathic in our prescriptions for rheumatism, and yet we could show much better results.

Dr. A. A. Moore's (Camden) paper is erroneously titled *Spinal Meuingitis*, when in reality he records three cases of tetanoid fever, (or, as it is more generally known, cerebro-spinal fever,) which recovered.

Dr. R. A. Kinloch describes his *New Form of Intra-Uterine Stem Pessary*, manufactured and sold by Messrs. Tiemann & Co. as the "Elastic Spring Stem Pessary" or the "Buckle Pessary."

Dr. F. Peyre Porcher records his experience during and since the war with *Open Dressing of Amputation Wound—Wetted Adhesive Straps*, which is entirely satisfactory.

The volume concludes with a reprint from the *Medical Record* by Dr. R. W. Gibbes, Columbia, of a case of *Comminuted Fracture of the Femur in a Patient aged 83—Plaster of Paris Dressing—Recovery.*

Transactions of the Medical Association of Alabama, Montgomery, April 13–15, 1875, Dr. JOHN J. DEMENT, Huntsville, *President*; Dr. BENJ. H. RIGGS, Selma, *Secty.* Pp. 360.

Our readers will recall that a year ago we had occasion to speak highly of the Transactions of 1874, then issued; we again have the pleasure of opening a volume which reflects as much credit upon the taste and energy of the Publishing Committee, and one, too, as valuable in its scientific papers. On account of our limited space, we must let the incidental remarks in our May No., 1875, in connection with the report of proceedings of this session, suffice, with reference to the address of the retiring President (Dr. Weatherly) and the impromptu oration by Dr. Ketchum.

The next paper is by Dr. E. P. Gaines, of Mobile, on *Tuberculosis and Scrofulosis*, which exhibits much careful study and observation, and confirms the conclusions now becoming popular, that these are distinct conditions—the first being an incurable constitutional vice, not dependent upon inflammation for its local manifestations; whereas, the latter is due to the deposit of "yellow tubercle" in the glands, and sometimes in the lungs, as the result of inflammation, and is curable.

Dr. W. A. Bradfield, of East Pascagoula, Miss., reports a case of

Puerperal Eclampsia, to show the happy effect of morphia hypodermically used, during the stage of unconsciousness. He also gives a case of *Necrosis and Caries of the Humerus*, which required excision of a portion of the bone.

Dr. A. S. M'Keithen's (Prattsville?) very interesting report of the case of a negro woman who gave birth within 15 minutes to two children—one mulatto and the other a negro—is a valuable contribution to the subject of twin births where children are begotten by different fathers near about the same period.

Dr. J. S. Bankson (Stevenson) reports briefly a case of *Nystagmus* cured by quinia, potassium iodide, &c., after the failure of potassium bromide.

Dr. W. D. Bszzell (Mobile) contributes one of the most generally valuable papers in the whole volume on the *Climate of U. S., with reference to Consumption and Pneumonia.* It brings out prominently the reputed advantages and disadvantages of those sections of country for which special claims have been made as health resorts. No advice, however, could be more in consonance with professional observation and reason than the concluding sentence of his paper: "But in the name of common sense and humanity, and for the sake of science, do not send from friends and the comforts of home those unfortunates who have already passed the bounds of curability."

After a careful review of the recent observations regarding *Malaria—Its Nature and Spread*, Dr. Benj. H. Riggs thus formulates his conclusions: (1) Malaria is due to vegetable, organic germs or spores, which (2) grow and multiply in soils with superficial groundwater, which have been exposed to a temperature at and above summer heat, and which contain vegetable matter in solution. Too much water is as fatal to the process as too little water. (3) These germs are heavier than atmospheric air. Their vertical spread varies from 30 to 1000 feet, while their horizontal spread does not often exceed 500 yards. (4) As surely as vaccination prevents small pox, so surely will a thorough system of subsoil drainage prevent malaria.

Dr. F. M. Peterson's (Greensboro) report on *Progress in Gynæcology* is well written, and a fair outline of the most important advances.

Dr. Jas. Guild (Tuscagoula) "*presumes*" to claim priority in the performance of the median lithotomy operation, *because* Rizzole's previous operation was not known to him!! He mentions, however, a remarkable case in which the spear-point of a sword-cane was broken off in a man's brain, causing epileptic seizures. Two years after the injury, the point was removed, and the fits ceased.

Dr. R. Coleman reports a case of *Triple Birth.*

Dr. Jerome Cochran's exhaustive *History of the Small-pox Epidemic in Mobile in* 1874–5, is a contribution of great value; but notwithstanding his authoritative eminence, some of his general deductions are open to criticism.

Notices of Transactions of North Carolina and Maryland Societies are crowded out, though this No. has 80, instead of 76 pages.

MORTUARY STATISTICS OF SOUTHERN CITIES FOR AUGUST, 1875.

MOBILE.—"Of the 14 still-births, there were three pairs of twins—one pair, both males; one pair, both females; one pair, both females. No case of yellow fever is reported. Quarantine is still rigidly in force against all places where yellow fever is known to exist—especially Pascagoula, where the disease is now raging with great violence."

(Compiled from Reports of the several City Boards of Health.)

Cities	RICHMOND, VA.				NORFOLK, VA.				LYNCHB'G, VA.				MOBILE, ALA.				SELMA, ALA.				ATLANTA, GA.			
Health Officers, ... Doctors	J. G. Cabell.				Wm. M. Wilson.				W. H. Dulaney.				W. D. Bizzell.				John P. Furniss.				E. L. Connally.			
Population	Census Feb., 1874, though estimated at 65,000.				Estimated.				Estimated.				Census 1870. In addition 1,200 Creoles are estimated				Estimated.				Census 1873, tho' estimate is 35,000.			
	White. 33,452		Colored. 27,213		White. 12,500		Colored. 9,500		White. 7,000		Colored. 7,000		White. 18,115		Colored. 13,919		White. 3,500		Colored. 4 000		White. 18,526		Colored. 11,607	
Sex	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M	F.	M.	F.
Number of deaths	35	28	60	50	—	11	13	18	6	5	14	8	17	7	29	24	1	2	4	7	00	00	00	00
Number still-born in addition	0		8		0		0		1		1		0		14		2		0		0		0	
AGES. Ages unknown not calculated. Under 1 year	20		40		Color not given, 13				1		8		3		8		3		4		No report.			
" 3 years	16		37		" 7				2		5		1		10		...		1					
" 10 "	5		2		" 4				...		3		2		6		...		...					
" 20 "	...		2		" 1				1		2		....		1		...		1					
" 30 "	3		3		" 7				....		...		3		12		....		...					
" 40 "	2		1		" 4				1		...		3		5		...		2					
" 50 "	5		4		" 10				...		1		2		...		...		...					
" 60 "	5		3		" 3				1		...		3		4		...		2					
" 70 "	2		3		" 2				3		...		3		4		....		1					
" 80 "	2		10		" ...				...		..		2		3		...		...					
" 90 "	3		5		" 1				...		1		1		...		...		...					
" 100 "	...		...		" ...				...		...		...		...		...		...					
Over 100 "	...		...		" ...				...		...		...		...		...		...					

CAUSES OF DEATH.

Abscess	.....	1	1	.....	.....	.....	1	.....	.....	.....	
Accidents, Suicides, Wounds, &c	3	3	.....	.....	1	.....	.....	.....	.....	1	
Apoplexy, Brain Congestion	.....	.....	1	1	.....	1	.....	.....	.....	.....	
Ascites, Dropsy, &c	1	4	.....	.....	.....	1	.....	4	.....	.....	
Asthma	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	
Birth, Premature	2	.....	1	1	.....	.....	2	2	2	.....	
Bright's Disease	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	
Cancer	.....	1	1	1	.....	.....	3	1	1	.....	
Cancrum Oris	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	
Childbirth	.....	.....	.....	1	.....	.....	.....	2	.....	.....	
Cholera Infantum	13	23	2	2	2	.....	.....	.....	.....	.....	
Cirrhosis Hepatica	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	
Congestion Bowels and Lungs	2	1	.....	.....	1	.....	2	4	.....	.....	
Consumption	6	7	4	1	1	4	2	8	.....	2	
Convulsions	2	7	.....	5	.....	3	1	3	1	.....	
" Puerperal	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	
Diarrhœa & Dysentery	8	8	.....	5	1	.....	2	4	.....	1	
Enteritis, Gastro-enteritis	.....	2	1	.....	2	1	.....	3	.....	.....	
Epilepsy	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	
Fever—Congestive	.....	1	.....	.....	.....	1	.....	2	.....	.....	
" Intermittent and Remittent	.....	.....	.....	1	.....	.....	.....	1	.....	.....	
" Puerperal	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	
" Typhoid	1	3	1	1	.....	...	.....	.....	.....	.....	
" Typho-malarial	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	
Flooding	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	
Gangrene	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
Gastritis	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Heart Disease	3	4	3	.....	.....	.....	2	1	.....	.....	
Hemoptysis	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
Hydrocephalus	.....	.....	.....	.....	.....	.....	1	1	.....	.....	
Hydro-Pericardium	.....	.....	.....	.....	.....	.....	.....	1	.....	1	
Inanition, Old Age, &c	3	5	.....	2	1	1	.....	2	.....	.....	
Intussusception	1	.....	.....	.....	.....	.....	1	.....	.....	.....	
Jaundice	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	
Kidney Disease	.....	.....	.....	.....	1	.....	1	.....	.....	.....	
Marasmus	.....	.....	2	.....	.....	.....	.....	1	.....	.....	
Meningitis	3	2	.....	.....	.....	.....	.....	.....	.....	.....	
Paralysis, General	.....	1	1	.....	1	1	.....	.....	.....	.....	
Peritonitis	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	
Pneumonia	.....	3	.....	1	1	.....	.....	.....	.....	.....	
Rheumatism	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	
Scarlatina	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	
Sunstroke	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
Syphilis	.....	1	.....	.....	.....	.....	.....	.....	.....	2	
Teething	.....	8	.....	.....	.....	.....	.....	2	.....	.....	
Tetanus Traumatic	.....	1	.....	.....	.....	.....	1	.....	.....	.....	
Trismus Nascentium	2	3	.....	.....	.....	.....	.....	2	1	1	
Whooping Cough	1	.....	1	.....	.....	.....	.....	.....	.....	.....	
Worms	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	
Unknown or Ill-Defined	5	18	.....	1	.....	10	.....	2	.....	3	

No report.

Dr. Robert S. Payne, as will be noticed by reference to our Mortuary Statistics, has retired from the Presidency of the Lynchburg (Va.) Board of Health. We hereby return our thanks, as well as those of our subscribers, to him for his favors, which have been continued since the *Monthly* was begun. During his connection with the Board of Health, he performed his duties faithfully, and by his prudent forethought and great energy, he has done much to advance the sanitary condition of Lynchburg.

We are glad to announce that Dr. Wm. H. Dulaney has kindly consented to continue to forward mortuary statistics from Lynchburg; so that there will be no omission of the tables from that city.

Dr. W. W. Murray.—In the heading of the very interesting article in our September No., by Dr. Murray—*Case of Post Mortem Parturition*—we alone are responsible for the error of affixing the title to his name of "*Professor of Materia Medica and Therapeutics, College of Physicians and Surgeons, Baltimore,*—a position which, he informs us, he resigned some time ago.

Vaccine Virus.—Dr. G. W. Harris, Va. State Vaccine Agent, Richmond, requests physicians to forward to him such vaccine crusts, *of altogether reliable character*, as they may be able to spare. Always state the address of the physician, the *color* and age of the child from whom the scab is taken, and if the child be the subject of any constitutional or acute disease.

We hope every physician in Virginia will appreciate that it is a personal obligation on his part to keep the State Vaccine Agent well supplied. No one could be more conscientiously careful in the discharge of responsible duties than Dr. Harris, whose services have also been rendered to physicians in adjoining States. The appeal made is, therefore, intended as well for the notice of these practitioners.

Petersburg (Va.) Board of Health.—By a recent act of the Common Council of Petersburg, a Board of Health has been established, with Dr. John Herbert Claiborne President—than whom no better selection could have been made. We hope in a short while to begin to supply regular Mortuary Statistics from this city.

The West Virginia Medical Student is the title of a new 32-page monthly journal to be begun in Wheeling, W. Va., about November 1st—Dr. James E. Reeves, Secty. W. Va. Med. Soc. etc., editor. Price $2 per annum. From our knowledge of the ability and energy of the editor, we may promise our readers that it will be an excellent journal, and one that we sincerely hope will be handsomely sustained by subscriptions and contributions.

The Philadelphia Medical Times is changed from a weekly to a bi-weekly, 24 pages. Subscription reduced to $2. *per annum.*

Attention is invited to circulars distributed with this issue.

VIRGINIA
MEDICAL MONTHLY.

VOL II. RICHMOND, NOVEMBER, 1875. No. 8.

Original Communications.

ART. I.—*Three Cases of Gun-shot Wound of the Pelvis, followed by Stone in the Bladder.** By HUNTER MCGUIRE, M. D., Prof. Surgery, Med. College of Va , Richmond.

CASE I.—M. C. Hopewell, of Moorefield,† Hardy county, West Virginia, was wounded at the battle of McDowell, May 8, 1862. The ball struck him on the horizontal ramus of the left pubic bone, about an inch from the symphysis, passed through the bladder and rectum, and came out just below the right sacro-sciatic notch near the edge of the sacrum. The day after the battle he was sent to the general hospital at Staunton, Va., where he remained under treatment for four months. For the first month urine passed freely through the wounds of entrance and exit, and was sometimes mixed with pus and blood. Fœcal matter was frequently discharged through the posterior wound. About three weeks after the wound was received several small pieces of bone passed from the rectum.

In February, 1863, he discharged through the urethra three small pieces of bone. About the end of the fifth week the wound of exit healed, and for the first time since his injury urine was discharged through the urethra. The water continued to be discharged through the urethra and wound of entrance for five months, when the latter gradually closed. It opened again, however, in a few weeks, and continued alternately to close and

*We have selected the following cases from Dr. McGuire's notes of "Cases of Stone." Want of space in this issue prevents a complete publication of all of his operations for stone, which number now fifty-one (51) cases with five deaths. They will appear in future numbers of the *Monthly*.—ED.

†This case appears in Report from Surgeon-General's Office, Washington, D. C.

open at varying intervals until September, 1865, when he came to me. At one time the wound remained closed for nine months. For two months he was confined to his bed; after this he was able to go about with the aid of crutches. At the end of four months he could walk slowly without assistance, and was for a long time engaged as clerk for the post-quartermaster at Staunton.

In September, 1865, he applied to me with symptoms of stone in the bladder. On sounding him the stone was readily discovered lying against the posterior wall of the bladder, and apparently fixed in that situation. His general health was very bad in consequence of the pain and irritation he suffered, and urine and pus were discharged through the fistulous opening. After some days of preparatory treatment, I performed the lateral operation and found the stone attached to the mucous membrane over and around the old wound in the posterior wall of the bladder. The patient recovered without any untoward symptom; the fistulous opening closed at the same time that the wound in the perineum healed, and he was out of bed on the fifteenth day.

I received a letter from this gentleman about a year ago (nine years after the operation). The fistulous track has remained closed, and during this time he has been perfectly free from all vesical trouble.



Exterior view of calculus.



Sectional view of same.

The calculus, which was presented to the Army Medical Museum at Washington, consists principally of the triple phos-

phates of lime and magnesia, and weighed, immediately after its removal, ten and a quarter ounces. It has for its nucleus a piece of bone half an inch long.

CASE II.—John Ely, aged about 40 years, came to me November 24th, 1870, with symptoms of stone in the bladder. He stated that in April, 1867, he was stooping down with his back to a camp-fire, when a pistol (Colt's army revolver) in the hands of a comrade was accidentally discharged, and the ball struck him just above the right trochanter major. He suffered severely from the wound, and was confined to his bed for four weeks after the accident. He had pain and tenderness of the abdomen, high fever, and was delirious a part of this time. The physicians in attendance made several ineffectual efforts to find the bullet, but finally concluded to give up the search, believing it had lodged somewhere in the pelvic cavity. He had no trouble with his bladder during his confinement. At the end of the fifth week he went to work carting coal, and suffered no pain or inconvenience in consequence of the wound until 8 or 9 months had passed, when symptoms of stone suddenly presented themselves.

Notwithstanding the severe pain which the motion of the cart produced, he continued to labor until two months ago, when one day his suffering was so great that he fell from his seat on the cart and was carried home in an insensible condition. He says (and his wife corroborates his statement), that in trying to pass water he strained until blood came from his mouth, nose, and ears. During one of those violent efforts he felt something give way, and was very soon afterwards relieved by a discharge of urine from the rectum. Since that time he has had no control whatever over his bladder. Some urine dribbles almost constantly from the penis, but the greater portion is discharged through the bowel. His general condition was so bad that I refrained from examining his bladder for some days after he was admitted into the hospital. He was put to bed, given a good diet, wine and quinine; an infusion of triticum repens to drink, and a dose of extract of belladonna night and morning.

He improved rapidly upon this treatment, and a few days afterwards I sounded his bladder and found the stone broken into a large number of fragments, and lying loose among them what I believed to be the ball. I could distinguish the latter

with the sound from the fragments of stone. I attempted to find the vesico-rectal fistula, but the effort caused the man so much pain that I desisted. The opening was probably small, as the urine accumulated slowly in the bowel, and none of the fragments of stone had escaped by that direction.

Briefly, then, his history was this: A ball from a Colt's army revolver lodged in the pelvic cavity about three and a half years ago, giving some inflammatory trouble for four weeks, and then slowly (taking eight months) working its way into the bladder. Symptoms of stone, or of the presence of a foreign body, in the bladder suddenly set in; after two years more, spontaneous fracture of the stone and rupture of the coats of the bladder.

Dec. 3, 1870.—The patient's condition being as favorable as it was possible to get it, he was brought before the class, chloroform administered, and the lateral operation for stone performed. A number of fragments and the bullet were removed with forceps, and numerous smaller pieces washed out with the syringe.



Fragments placed together in their natural position, and preserved in Army Medical Museum.

The stone (triple phosphates) and the ball weighed 580 grains. By carefully examining the fragments, it could be seen that the ball had been the nucleus, and the lamina of stone corresponded in shape to that of the bullet. The loss of blood was slight, but the shock was severe, and reaction did not take place for several hours. The patient was placed in bed on his side, stimulants given and warmth applied.

Dec. 4—Doing well; has no pain; cheerful and hungry.

Dec. 5.—The room being cold, the patient, during the absence of his nurse, got out of bed, walked to the stove (three or four yards), and sat by it for half an hour—or until the return of the nurse.

Dec. 6.—Has had no trouble in consequence of his walk, &c., yesterday, and urges me to let him get up again; has good diet, wine and iron.

Dec. 9.—Yesterday one of his friends brought him some fat

pork and corn bread, which his careless and ignorant nurse permitted him to eat; had, in consequence, cholera morbus last night, from which the house-surgeon for a time thought he would die; better this morning, but very feeble.

Dec. 14.—Slight discharge of urine by the urethra for the first time since the operation.

Dec. 31—Wound in perineum closed; small quantity of urine still discharged by rectum, but diminishing; sent home to-day.

Jan. 15, 1871.—Came to the hospital to be examined to-day. The vesico-rectal fistula closed entirely; has complete control over his bladder, and in all respects is well and able to work.

Sept. 1875.—Saw the man to-day; has continued well and at work as a carter.

CASE III.—Robert B. Dunlop, near Churchville, Augusta county, Va., was wounded June 9th, 1862, at Port Republic. The ball struck him one inch below the crest of the ileum of the left side, and half-way between the anterior and posterior superior spinous processes, passed through the bone and lodged in the pelvic cavity. The wound was followed by pain, fever, and some abdominal distension. Micturition was painful and difficult for two weeks, and the urine contained blood. The trouble about his bladder passed off entirely in two weeks, and in six weeks after the injury was received, he reported to his regiment for duty. Every few weeks for a year the wound in his hip reopened and small pieces of bone were discharged. During the whole of 1863 he was in active service as an infantry soldier.

He was wounded again by a musket ball in the shoulder in 1864. The ball is now somewhere near the shoulder-joint.

After the war he pursued the active and laborious life of a farmer until September, 1867, when for the first time since he was shot in the hip he had trouble with his bladder. The urine again became bloody, and its passage from the bladder frequent and painful. This lasted for a month and then entirely disappeared. In the early part of 1869 these symptoms again presented themselves, and after lasting a month again passed away. During the intervals of these attacks he was free from all vesical disease, and worked daily on his farm.

In February, 1870, one day while passing water he noticed that air escaped with the last drops of urine, and continued to be

discharged for a few seconds after his bladder was emptied of water. He says he felt as if the air was passing down his bowel and about to escape at the anus; but instead of this, to his surprise, it passed through the urethra. There was no pain at this time about his bladder, or increased frequency in passing water. He had, as far as he knew, no symptoms of rectal disease. The escape of air through his penis occurred frequently during the month of February.

In *June*, 1870, symptoms of stone in the bladder presented themselves. He had been lying down for an hour or so, and suddenly arose into a sitting posture, when he felt something drop into his bladder. He was seized immediately with terrible pain, which lasted for some hours, during which he discharged from his bladder half a pint of pus and blood. He was confined to his bed for a week or ten days after this. Symptoms of stone have been constantly present since that time.

In *September*, 1871, had an attack of orchitis, which lasted for some weeks. Another attack of the same sort March, 1873.

I saw him with his physician, Dr. Wilson, for the first time *April* 14, 1874. He had been confined to his bed for 4 or 5 months, and, although greatly emaciated, his appetite had remained good; he had some strength, and was sanguine of getting well if operated upon. The urine dribbled constantly from his bladder, over which he had lost all control. He laid upon his back, and kept his hips constantly elevated by a pillow. During a "fit of stone," he was in the habit of introducing his finger into the rectum and pushing the foreign body out of the way. Dr. Wilson occasionally introduced a catheter for the same purpose. He has been taking opium freely to relieve his suffering.

Chloroform was administered, and, assisted by the two Drs. Wilson (father and son), I performed the lateral operation for stone. The perineum was very thin, and the bladder easily reached. I found the stone (triple-phosphate) about the size of a turkey-egg, with the bladder closed tightly around it. It was easily crushed with the forceps, and the pieces, along with the bullet, removed with that instrument and the scoop and syringe. The ball had been the nucleus, and occupied the centre of the stone. There was very slight shock, and no stimulant needed after the operation.

I left him in the hands of Dr. T. C. Wilson, of Churchville, who attended him until he was well. His recovery was slow but complete.

In a letter received from Mr. Dunlop, dated October 3, 1875, he states: "I am perfectly sound in every way, and as stout as I ever was. I mall and chop wood, and do all kinds of farm work."

We are indebted to the kindness of Surgeon George A. Otis, U. S. A., Washington City, for the loan of the above electrotypes.

ART. II.*—*The Pathology and Treatment of Amenorrhœa.* By JOHN C. PETERS, M. D., New York City.

We propose to mention the remedies and the amount of experience in their favor which have been used empirically in the treatment of amenorrhœa; next, to give such explanation of their action as we can, in order that they may hereafter be used understandingly, if possible; and lastly, such physiological data about the uterus and ovaries as are necessary to the comprehension of the subject. As the last often has to come first, we will commence with the former.

There are three distinct kinds of epithelium in the female organs of generation, viz., the globular form in the ovary; the vibratile-columnar in the uterus; and lastly, the tessalated pavement in the vagina. These epithelia are the most important elements in the physiology of these organs, and at the period of puberty (Küss) their functions are suddenly developed. The ovarian epithelium takes the lead, and ovulation ensues; the epithelium of the uterus next becomes very active and menstruation takes place. At each menstrual period, generally only one ovisac or Graafian follicle becomes perfectly developed, near the surface of the ovary. The ovisac swells from increase of its epithelial contents; and is surrounded also by congestion or swelling of the central spongy portion or stroma of the ovary which forces the ovum towards the surface, where rupture of it occurs, bringing out the ovum and debris of the proligerous disc

*This article, though somewhat elementary in character, is yet, as a whole of such *practical* value to every physician that we publish it entire.—ED.

into the Fallopian tube. The latter is a movable, contractile and erectile organ, which, by the peristaltic contraction and movements of its ciliated epithelium, sweeps the ovum along into the uterus. The arrival of the ovum in the womb acts as a stimulant to the uterine epithelium, so that the ripening and fall of the ovum into the uterus coincides almost exactly with a menstrual period, viz., 28 days on an average. This periodical occurrence is also attended with molimina menstruationis, viz., congestion of the spinal cord, with pains in the lumbar region and thighs as well as in the ovaries and uterus, as if widespread nervous and vascular commotion were essential previous to the monthly hemorrhage.

However this may be, according to Kolliker, at the menstrual period the whole uterus enlarges and its texture expands, from distention of its vessels and considerable infiltration of the entire organ with blood plasma. The mucous membrane really becomes thickened from 1 or 2 to even 5 or 6 lines—also softer; and the utricular glands become well marked and easily isolated; while numerous immature round and fusiform cells are noticed in its tissue. The blood-vessels of the mucous membrane, especially of the body and fundus become extremely numerous and distended; more particularly the internal superficial capillary plexus, which changes the normally white or whitish red mucous membrane to a bright red color. With the escape of the blood from the superficial ruptured capillaries, the epithelium of the mucous membrane is in a great measure thrown off, or moulted, except that of the cervix; and is always to be found mixed in large quantity with the blood which fills the cavity of the uterus. After the menstrual period, the parts rapidly regain their pristine condition by contraction of the previously dilated vessels, and the epithelium is regenerated.

As before said, the uterus is lined with a vibratile columnar epithelium. This is almost immediately attached to the muscular coat, with scarcely any substratum of connective tissue, and hemorrhage easily takes place when it is removed. The epithelium is abundant, endowed with a good deal of activity, and forms, by its deep vegetations, tubular glands, which are analogous in appearance to the gastric glands and those of Lieberkuhn, and are imbedded in the muscular walls. It is remarka-

ble, says Küss, that this epithelium is subjected to a sort of monthly moulting, exactly coincident with ovulation; and as it protects and covers the uterine muscle, which is quite vascular and even erectile, it happens that the epithelial shedding exposes a large number of little vascular canals, which burst under the influence of the general turgescence of the uterus at this moment and occasion a more or less abundant hemorrhage. Thus, though the hemorrhage is the most obvious, and seems to be the most important phenomenon, it is none the less true that the very essence of menstruation is an epithelial moulting, sympathetic and coincident with the epithelial development in the ovisac, which leads to the shedding of the ova, and to ovulation. Uterine hemorrhage may occur without ovulation, and it is barely possible that menstruation may, provided the necessary epithelial changes occur.

It is not, however, to be regarded as normal, if after the menstrual period, or during it, the whole of the uterine mucous membrane, or portions of it are detached. It is the epithelium alone which should fall off. Hence the menstrual discharge consists of an abundant excretion of epithelium, which is generally regarded as a secretion of mucus mingled with blood. The vaginal mucous membrane takes part in it, for at the commencement of menstruation an unusual discharge of vaginal epithelium or so-called mucus begins to take place, which soon becomes yellowish or rusty brown in color, from the admixture of a certain proportion of blood from the uterus, and by the 2d or 3d day, the discharge has the appearance of nearly pure blood.

It is generally supposed that menstruation is not merely a uterine epithelial process, but also a result of more or less vasomotor innervation; so that unless blood is thrown off from the uterine surface, the hemorrhagic flux may be accomplished by other and more distant mucous membranes, causing the nasal, pulmonary or intestinal hemorrhages which sometimes occur at the catamenial period. Discharges of blood from the breasts have even been noticed.

Another ingenious theory is, that the uterine epithelium becomes ripe and old at the end of every month; and although it is at its highest state of development like ripe fruit, it must now fall, or

be shed. Some say that it is pushed off by active congestion of the uterus, from ovarian stimulation; others that a sudden vaso-motor paralysis of the uterine vessels occurs; they become distended, hemorrhage occurs, and the epithelium is washed off.

However this may be, we know that nitrite of amyl, which produces the most decided vaso-motor paralysis of any known drug, is especially dangerous if given immediately after delivery, for it causes relaxation of the firmly contracted uterus, and may induce very alarming hemorrhage—a result to be expected from its known physiological action. Experiments are now going on with nitrite of amyl in amenorrhœa, with apparently encouraging result. It seems most indicated in a very obstinate class of cases in women with either tense fibre, or small and dense uteri, and when the ovaries also are small, firm and bloodless.

Before leaving the subject of epithelial activity, we may say that Küss' theory of the use of bile is, that it does not take an active part in digestion, but is poured out seven or eight hours after the ingestion of food; that it speedily dissolves all cellular elements, including the blood globules, and that the greatest activity of the epithelial desquamation of the intestines, which is a daily process, takes place when the bile comes in contact with it. A chief purpose served by the bile is the removal of ripe, dead, or effete intestinal epithelium by promoting the destruction of the old cells, and by promoting the restoration of the new; by sweeping all the old intestinal epithelium, when the laborious task of absorption has been completed by it, and thus, as it were sweeping the workshop clean after the work is done. New and fresh epithelial cells lie in the deeper portions of the epithelium, and they now come forward to accomplish their mission.

The difference between intestinal and uterine epithelium is that one dies off daily—the other only once a month; and the former has a fluid which is daily secreted to sweep it off, while the latter has none, except it be the blood at the menstrual period, or the antecedent flow of mucus which precedes the establishment of the sanguineous discharge.

Hence, in order to produce menstruation, we may have to induce ovulation, or at least epithelial growth in the ovisacs; or produce a healthy growth and decay of epithelium within the uterus; or at least bring about congestion of the ovaries and

uterus. The peculiar action of alkalies on epithelium should not be forgotten.

Amenorrhœa may be made to include every absence of the external appearance of the menses; but retention of the menses is not usually included in the term, although it is always necessary to establish the diagnosis. Menstruation may never make its appearance from congenital absence, atrophy, non-ovulation or other disease of the ovaries. *Congenital absence* of the ovaria cannot always be determined by physical examination, but, according to Byford, there is always such a complete absence of the signs of womanhood that we cannot long hesitate. There are no prominent mammæ, the manners peculiar to females, the desire for the society of males and the sexual propensity are absent. There is no hair on the pudenda, and the whole sexual organs are not developed. The patient at mature age presents no more evidence of sexuality than the little girl; and these signs remain permanent at all ages. As we cannot create new ovaries, this form of amenorrhœa is incurable. *Atrophy* of the ovaries has nearly the same symptoms; it is not necessarily congenital, but may be acquired. *Non-ovulation* may be suspected when none of the pains and symptoms about the groins, loins, hypogastrium and thighs, present themselves at the monthly periods. Simple *atony* of the ovaries may be produced by mental depression, indolence, want of fresh air, or constitutional diseases, such as anæmia, general debility, absolute want of appetite, &c.

As regards treatment, there are remedies and means which will promote a discharge of blood from the uterus, as from any other organ, provided it be vascular enough; but to produce and promote the evolution of ova, with all the phenomena of ovulation, as well as uterine hemorrhage, is a different matter. There are but few remedies, says Byford, which are *oviferous* in their nature, or which act specifically upon the ovaries; but we can increase their vascularity and nervous exaltation with iron, nux vomica, phosphorus, stramonium, staphisagria, cantharides, damiana, nitrite of amyl, &c. The muriate of gold, clematis erecta, rhododendron, and agnus castus have empirical reputations in producing stimulation of the ovaries, while iodine, baryta, lead and conium maculatum,

are known to produce atrophy of the mammæ, and testicles, and probably also of the ovaries.

Acquired atrophy of the ovaries generally comes from increased growth of connective tissue, producing a state of cirrhosis like that of the liver, which compresses the ovisacs and produces atrophy of them. The muriate of ammonia and borax are supposed to be the best remedies to prevent excessive growth of connective tissue.

Amenorrhœa from absence of the uterus is not usually attended with chronic suffering, and the patients, although from 20 to 30 or more years old, may seem in perfect health. The presence or absence of the uterus may generally be determined by the introduction of the finger well up into the rectum, and a catheter deep into the bladder, and then approximating them. If the ovaries are present and active the patients may present all the external evidences of womanhood, (Byford,) such as perfect mammæ, mons veneris, labia majora, clitoris and hair. They have the demeanor of women, desire for the society of men, and may have strong sexual feeling.

When there is partial atrophy of the uterus and ovaries, the breasts and uterus may be developed to about the size of those of a girl of 10 or 12 years old; there may be hair on the pubes, and the mons and clitoris may be well developed; but there will be little or no sexual desire.

The treatment of a slightly developed uterus is principally mechanical by the introduction of a sponge-tent once every week, or two weeks; or the use of Simpson's or Noeggerath's intra-uterine galvanic pessaries. According to Dr. Thomas and others, it is astonishing how much development may be obtained by a persevering use of this plan. In many instances, it will restore the uterus to nearly its normal size, and cause a return of the menstrual flow. But it often requires many months, and even some years, to accomplish this object. The use of nitrite of amyl internally to produce congestion of the uterus has been suggested.

Acquired atrophy is often confined to the uterus; while congenital atrophy may involve all the genital organs, including the breasts and nipples. Byford has met with a number of cases of acquired atrophy, generally attributable to some early miscar-

riage which it seemed to follow. There was hyper-involution of the organ after abortion. The above teasing processes are also required.

When amenorrhœa is caused by chronic inflammation of the uterus, there may be either condensation and atrophy, which is the most common; or the uterus is greatly enlarged, when there is more likely to be menorrhagia. This latter form of amenorrhœa from hypertrophy is apt to be associated with the most miserable states of health; the suffering, nervousness, debility and emaciation may be extreme; and the patient may be bed-ridden for months. A long course of aconite and conium, or blue pill and conium, or bromide of potassium, or corrosive sublimate, or arsenic, are among the most useful plans of treatment.

In the mildest form of atony of the mucous membrane of the uterus, there may be a periodical discharge of mucus, or seromucus. The uterine congestion, or the supply of uterine capillaries is not sufficient in force or quantity to give rise to hemorrhage, but merely to cause an effusion of the thinner portions of that fluid. Here those remedies which act specifically upon the mucous membranes, like senega, pulsatilla, borax, &c., are most useful.

After these general remarks we proceed to the consideration of those remedies for which there is most experience in the treatment of amenorrhœa. And we prefer a simple alphabetical arrangement in order that all may receive fair attention; and that the so-called lesser remedies may not be overlooked in a one-sided consideration of the more active drugs, like sabina, rue, hellebore, aloes, iron, ammonia, &c.

Aconite has been advised by some French and German physicians, especially when the disorder depends upon congestive, sub-inflammatory or rheumatic disease of the uterus. Dr. Copeland has prescribed the alcoholic extract with decided benefit, but small doses of the tincture of the root may be continued for weeks or months, and will greatly relieve the neuralgic and other congestive sufferings about the organ.

Aloes is recommended by Schœnlein, gr. x, in a small quantity of warm fluid—to be thrown into the rectum at the period when the catamenia should occur. He regards its action as more certain than that of any other emmenagogue. Ashwell has em-

ployed it thus with decided advantage; but its action is very much increased by the addition of 10 or more drops of aqua ammoniæ. It is also an excellent purgative, stimulating the whole portal and uterine systems. In atonic cases, it is best given in pill form, in combination with sulphate of iron. Stillé says, in imperfection or suppression of the uterine discharge without congestion of the pelvic organs [or with such as can be relieved by unloading the portal system], aloes is often useful, if taken a few days before the menstrual period. The greater the torpor of the uterine system, the more appropriate the use of aloes becomes [and then may be combined with sabina], and hence is most applicable in amenorrhœa of phlegmatic females. In constipated females it should be used daily—1 or 2 grains, with an equal quantity of extract of sabina.

Ammonia was employed by Lavagna by injection of 10 or 12 drops into the vagina, in an ounce of milk. The discharge sometimes returned in 24 hours, and sometimes not for 5 or 6 days. The injection produced an unpleasant sensation, and sometimes even pain, with a white discharge, but no further annoyance. Merat and DeLens used it successfully. It has been favorably spoken of by Drs. Blundell and Ashwell, who used ʒj of liq. ammon. in a pint of milk, injected into the vagina daily. I have used the preparations of ammonia repeatedly with great success. I generally give them internally, and often prefer the aromatic spirits in doses of ʒss or ʒj, several times a day. A pill of aloes and carbonate of ammonia is often still more useful, when there is atonic dyspepsia, with acidity, flatulence, constipation, great torpor and debility. I regard ammonia and some other alkalies as direct emmenagogues.

Ammoniæ hydrochloras is strongly recommended by Sundelin as an emmenagogue in those cases in which the disease depends upon, or is connected with inactivity of the uterus. It has been largely given for years in some of the London hospitals, with very satisfactory results, in amenorrhœa arising from functional inactivity; but I prefer it when there is enlargement of the uterus from excessive growth of connective tissue. The opinion has long prevailed that it especially affects the mucous membranes, and Böcker believes that in them it hastens very greatly the nutritive changes and the exfoliation of epithelium; and hence may promote ovulation and menstruation. In many cases of amenorrhœa and chlorosis, there is an excess of fibrin in the blood; and the muriate of ammonia, in some instances, does produce a decided decrease in the solid constituents of the blood, while it very notably increases the solids of the urine, except uric acid, which is slightly diminished. If it fails, and more

stimulation is required, the carbonate and liquor ammoniæ will often succeed.

Apiol, the peculiar principle of the seeds of petroselinum sativum, or common parsley, obtained by treating them with alcohol at 158° to 176°F., is a yellowish, oily liquid, of an acrid, piquant taste. According to Dr. Joret, it is one of the safest and best emmenagogues, when given night and morning for 5 or 6 days before the expected period. The usual dose is gtt. xv, in capsules. It is recommended in every case of excess, diminution and perversion of the vitality of the uterus, and, of course, fails in the majority of instances. Still, parsley seeds were recommended by Galen as stimulant, diuretic, emmenagogue and carminative, and Stillé has found no medicine so certain in re-establishing the suspended flow, or in causing its original appearance when this has been unduly delayed, provided some indications of a menstrual nidus are present. Joret, Horrolle, Dubail and others advise it to promote the primary establishment of the menses; to restore them when they are suspended; and to render them abundant when they are scanty and painful and attended with pain in the pelvis, loins and thighs. They repeat that no medicine is more worthy of confidence than this. Dr. H. C. Wood thinks it about as valuable as the more ordinary essential oils; and the action of the seeds probably resembles that of fennel, anise and coriander, and is chiefly carminative. The imported capsules contain about $\frac{1}{4}$th of a gramme, and may be given twice a day for a week before the expected period; and every few hours if any symptoms of the menstrual molimen appear. It is supposed to be particularly useful in irregularities caused by intermittent fever.

Argenti nitras.—In 1839, Retzius, of Stockholm, treated amenorrhœa, supposed to depend upon torpor of the uterus, by injecting a solution of lunar caustic, 1 or 2 grains to the ounce, into the cavity of the uterus just before the menstrual period. It can only act as an irritant, and the neck must be previously well dilated by sponge-tents. Dr. Lubanski speaks highly of applying the nitrate in substance lightly to the os uteri at the time of the expected appearance of the menses, and Dr. Egan also found it successful.

Arsenic was thought useful by Dr. Simpson in amenorrhœa, as well as in that peculiar affection of the bowels characterized by copious discharge of membranous shreds, and accompanied by great emaciation and a long train of neuralgic and other nervous symptoms. It is especially useful when chronic skin diseases accompany or cause the amenorrhœa. It is a useful alterative in chronic endometritis, and I have often used it successfully in

such cases. It is supposed to act as decidedly upon the epithelium of the uterus as upon that of the skin.

Cantharides.—Dr. Dewees placed much confidence in the internal use of the tincture, in doses of gtt. xx, gradually increased to gtt. xxv or xl. If it did not succeed in these doses, he thought it would not prove ultimately successful. Its action is somewhat similar to that of arsenic, and may be given as a stimulant, not only in torpor of the uterus, but in obstinate and chronic passive sub-acute inflammations. It is supposed by some to act only secondarily, by irritating the kidneys and urinary passages. Burdach, after the recommendation of Adair, recommended it, in combination with aloes, in amenorrhœa, especially when the suppression of the catamenia was connected with a leucorrhœal discharge from chronic endometritis. Dr. J. Murray employed it as a stimulant in amenorrhœa. In 1819, Dr. J. Klapp, of Philadelphia, published a series of 19 cases, which, he thought, demonstrated the power of cantharides to restore the suspended catamenia. He found it most useful in torpid cases, or when excessive action had been previously reduced by depletion. He attributed its curative effects to the irritation which it occasions in the bladder and rectum and adjacent pelvic viscera.

Chenopodium olidum, or stinking-goose-foot, has been recommended by Dr. Kreig, of Leipzig. The expressed juice of the fresh plant is only useful; the dried plant is less efficacious. Dr. Houlton also thinks that it acts directly upon the uterus. Like assafœtida, it is most reliable when there is hysteria or other nervous disorders. Although this plant is different from the chenopodium anthelminticum, or worm seed, it probably resembles it somewhat in its action. Long ago, Wilkins said that in various instances where parents have erroneously supposed worms to exist, the fine stimulating property of worm seed oil has removed general debility, indigestion and colic, with various other disorders, and restored the general health. Meigs also says that it acts beneficially upon various forms of digestive irritation which simulate the disorders produced by worms. Ten drops are often given on sugar, before each meal, for 2 days, followed by a brisk purge. The oil of savin is doubtless more reliable in amenorrhœa.

Colocynth, according to Stillé, like other drastic purgatives, was anciently resorted to, and is still used to promote the menses; but it is an uncertain and sometimes disagreeable remedy, and not as useful as aloes.

Cimicifuga racemosa, or black cohosh, or black snake-root, is supposed to exert a peculiar action upon the uterus, especially in the irritable condition often observed in patients for sometime

after menstruation has ceased, or becomes irregular when about to cease, and marked by pain, more or less periodical, in the lumbar region; it also affords rapid relief in the neuralgic pains often met with in such patients in other localities. Dr. D. A. Morse claims that it is very efficient in amenorrhœa, and advises that its use should be continued, although it fail to restore the flow at the first period—maintaining that, if persisted in for 2 months, a cure will rarely fail to follow. It is most useful when there are rheumatic or choreic symptoms, with profuse purulent expectoration, simulating phthisis, and when there is headache, vertigo and melancholy. Ringer recommends it when the menses are suddenly checked from cold, shock or mental emotion, with more or less severe pain in the head, back and down the legs, with stiff, sore muscles and bearing down pains. It is also said to be serviceable in that common and distressing headache occurring in nervous, hysterical women, especially at the menstrual period, with great mental disturbance almost amounting to madness.

Dover's powder, in the intense suffering which sometimes result from suddenly suppressed menstruation, is said to be most efficient by Dr. H. C. Wood, alleviating the pain and producing diaphoresis. It is often given in pills, as the powder is disagreeable to most persons. Morphine, in wine or syrup of ipecac, is acceptable to many.

Electricity.—Dr. Golding Bird says, in this agent we possess the only direct emmenagogue with which the experience of our profession furnishes us. In young women, where menstruation has not yet appeared, and in those who have been chlorotic and anæmic, and where tonics have failed, after relieving these conditions, to produce the flow, electricity is a most valuable remedy. When the catamenia have disappeared after cold, fright or other disturbing causes, it is equally applicable; but where there is structural changes in the ovaries or uterus, it may be either useless or injurious. A rapidly interrupted primary current, as intense as can be borne, should be passed from the sacrum to the hypogastric region, through and through the abdominal walls, and from the umbilicus to the perineum. These applications should be made daily during the week previous to the menstrual periods. Of 19 cases, 8 were relieved during the first month, 7 during the second, and the remainder after the third. Dr. Bird passed 10 or 12 shocks daily from the sacrum to the pubes. Dr. H. P. Dewees regards it as certain and powerful in cases of simple obstruction or suppression. Numerous examples of its efficacy are given by many authorities. An in-

ternal electrical treatment, consisting of alternating small doses of zinc and copper, has been suggested.

Ergot was used, says Stillé, successfully by Dr. Beekman, in New York, in 1809. Dieu has succeeded in restoring the flow of menses in young girls after their suppression for many months, and when iron had failed; and Neligan states that in several cases of chlorotic amenorrhœa, he employed the infusion with most beneficial results. Ringer says it has been recommended in amenorrhœa with anæmia after the use of iron. It proved successful in the hands of Dr. Neal. Dr. Wright has repeatedly seen deranged menstrual function restored by a persevering use of ergot. There is similar testimony from Drs. Beekman and Davis; but Leutin and others assert that amenorrhœa is generally attendant on ergotism. As the principal action of ergot is to produce persistent contraction of the capillaries, and to cure hemorrhage rather than ordinary amenorrhœa, it must prove most useful when there is attendant uterine congestion, chronic sub-acute metritis, and sub-involution and hypertrophy of the uterus. If it proves useful in other cases, it must act as an excitant or stimulant to torpid capillaries; or, by exciting or irritating the muscular fibre of the uterus, lead to its greater activity and growth. In this case, it may be powerfully aided by nux vomica, which often cures amenorrhœa in feeble subjects when given alone.

Fennel is among the milder emmenagogues—supposed also to promote the secretion of milk and the lochial discharge. Galen makes the same statements, and says it is an emmenagogue. Mitscherlich thinks it stimulates the digestive functions, and increases the renal, cutaneous and mucous secretions. Bontemps found that it acts decidedly as an emmenagogue, and if given too freely to nursing women may bring on their menses and cause the milk to subside. The decoction is made with 1 drachm of the seeds in ½ pint of boiling water, and given in wineglassful doses. The oil is given 5 to 10 drops at a time on sugar, or suspended in some vehicle, and is the preferable form to administer it, if we expect anything from this mild remedy. It may render the oil of sabina more palatable.

Ferrum is regarded as the main remedy in anæmic and chlorotic amenorrhœa, when the composition of the blood is impaired by a partial loss of the red disks, and the energy of the nervous system and its co-ordinations deteriorated. But the mere introduction of iron into the stomach will not always suffice to make red blood globules; still, it is always a useful remedy in anæmic states, and it may, perhaps, be conducted towards the ovaries and uterus by combining it with sabina, rue, aloes, ammonia, or other

decided emmenagogues. Its uses are too well known to require extended comment here. The muriate of ammonia and iron is a good combination, and borax and other alkalies increase its absorption and influence.

Gaultheria, or wintergreen, is used extensively in domestic medicine as an emmenagogue in infusion. The oil should be preferred.

Gossypii radix, or cotton root, was first introduced by Dr. Bouchelle, of Columbus, Miss., as a substitute for ergot. Dr. Shaw, of Tennessee, claimed for it very striking virtues in dysmenorrhœa and scanty menstruation, and particularly in suppression of the menses by cold. Dr. Ready, of South Carolina, corroborated the above. The decoction was preferred made by boiling 4 ounces of the inner bark of the root in a quart of water down to a pint, and given in wineglassful doses, but the fluid extract is doubtless the most reliable preparation.

Ginger is sometimes given in hot water as a sudorific and stimulant for the pain due to suddenly suppressed menstruation.

Guaiacum, as an emmenagogue, is regarded as much less stimulating than cantharides, and is believed by some to be especially useful in rheumatic dysmenorrhœa. The following formula, adopted from Dewees' emmenagogue mixture, is relied upon almost exclusively by Dr. H. C. Wood in the treatment of simple atonic amenorrhœa: ℞. Tinct. ferri chlordi, ʒiij; tinct. cantharidis, ʒj; tinct. aloes, ℥ss; tinct. guaiaci ammoniat., ℥iss; syrupi simp., ad ℥vj. S. A tablespoonful 3 times a day. In amenorrhœa, Dr. Dewees speaks in the highest terms of the ammoniated tincture. He gave it with more confidence than any other medicine, and succeeded with it where almost all other emmenagogues had failed, especially in cases of long standing. The cases most benefited by it are simple idiopathic, not dependent on organic disease. He often used purging and low diet, and persevered with the guaiac for a long time, and succeeded in restoring the menses after they had been suppressed for 1 or 3 years. It is prepared by macerating 4 ounces of the resin in a pint of aromatic spirits of ammonia, and the dose is from ʒss to ʒj. I cannot help believing that simple spirits of hartshorn, or the aromatic, will prove equally efficacious, and far more pleasant. The guaiacum may be given in pills, washed down with ammonia and water.

Hedeoma pulegioides, or common penny royal, is a stimulant aromatic, which often relieves nausea, flatulent distensions, colic, and emmenagogue virtues are also attributed to it by Stillé, who says it possesses as many, if not more, than other herbs of this class. In warm infusion (℥j to a pint), it often succeeds in bring-

ing on the menstrual discharge when it is delayed by temporary causes, especially by taking cold. It is given in doses of 2 or more ounces, and the oil in from 2 to 10 drops doses.

Helleborus nigri, the emmenagogue properties of which are very decided, was familiar to the ancients. Dr. Mead recommended it most highly, saying that he found in it so singular a virtue that it hardly ever failed in answering his expectations; and alleges that when it failed to restore the catamenia it produced some other discharge of blood. Stillé has used it successfully, but supposes that it acts merely as a cathartic, although it is said to stimulate the abdominal organs, augment the secretions of the liver and pancreas, and promote the catamenial and hemorrhoidal discharges. The dose of the tincture is from 50 to 60 drops; of the extract, from 5 to 15 grains. Heberdeen reported unfavorably of it, but Dr. Chapman recommended it. Dr. Wood speaks of it as a purgative emmenagogue, which is now rarely employed, but I have found it very efficacious. Pereria says it is adapted for torpid, phlegmatic individuals whose pelvic circulation is languid, as it acts as a stimulant to the pelvic organs, thereby promoting the menstrual discharge, and is an emmenagogue still much valued by some practitioners, in doses of 2 teaspoonfuls of the tincture in a glass of warm water, twice a day. The Germans prefer the extract, and in amenorrhœa the tincture martis hellebori. I have often used it, combined with aromatic spirits of ammonia.

Juniperus sabina has long been used in amenorrhœa. Dr. Home, of Edinburgh, employed it successfully in cases unattended with fever, and in which the circulation was languid. He used the powdered leaves in doses of 20 to 60 grains twice a day. Pereira regards it as the most certain and powerful emmenagogue in the whole Materia Medica, and has never seen any ill effects from it. He preferred the oil in doses of 2 to 6 drops on sugar. Ringer recommends it when there is want of tone in the uterus. Dierbach says it is a heating remedy which readily causes congestion of the genital organs, and one much used in chronic affections of the uterus, suppression of the menses, sterility, enlargement of the uterus after frequent confinements, uterine colics after numerous miscarriages, and even in commencing cancer. H. C. Wood says it is a powerful stimulant to the uterine system, which may be used in small, repeated doses in atonic amenorrhœa, and that the oil is the only preparation which should be employed. Dose, 5 to 10 drops every 3 or 4 hours. Stillé says sabina is particularly called for when uterine stimulants are appropriate, for it is, perhaps, the most powerful agent of its class. Nearly all writers of enlarged

experience concur in attributing very decided emmenagogue powers to it. Thus, Cullen says it shows a more powerful determination to the uterus than any other agent he employed. Vogt says it is most appropriate in cases of amenorrhœa occurring in persons of a torpid or relaxed constitution, and disposed to mucous accumulations and blenorrhœal discharges, and when there is a general atony of the system, and especially of the uterus, of which the capital sign is leucorrhœa, occurring exclusively or in an an aggravated degree about the catamenial period. Kopp recommended it when there is a scanty discharge of dark and clotted blood with expulsive pains, and when an augmented flow takes place irregularly, ceasing and re-appearing. He often prescribed it in conjunction with borax and iron.

Millefolium, Stillé says, exerts an elective influence upon the pelvic viscera that can hardly be doubted, and its most evident curative effects are manifested in uterine and hemorrhoidal affections. He decrees it to be a stimulant tonic, which, like many reputed emmenagogues, is useful in restoring the catamenia to a normal state, both when they are suppressed and scanty and when they are profuse. Although more frequently used against all sorts of hemorrhages, Voigtel says it is not less indicated when irregularity or suppression of the menses depends on debility. M. Rouzier Jolly published several cases, which prove that it is very efficient in re-establishing suppressed menses when given at the catamenial period. Manoury found it to restore the lochial discharge, and M. Richart, of Soissons, declares it useful in relieving uterine colic in young girls at the establishment of puberty. I regard it as as little indicated in amenorrhœa as ergot, except in cases arising from congestion, or hypertrophy, which I consider rare.

Myrrh is mentioned in the Bible among the articles used in the purification of women, and as an emblem of purity and soundness. It has been used in promoting menstruation, and, in fact, has been supposed to possess a specific property in this direction. It increases the appetite and quickens the digestion, while it promotes the intestinal secretions. Amenorrhœa and scanty menstruation, when they depend upon a cold, relaxed and torpid state of the system, are benefited by it, especially when given in combination with iron, as in Griffith's mixture. It may be given in doses of from 5 to 30 grains, in pill form, or combined with aloes or guaiac. H. C. Wood says it is a tonic emmenagogue employed in atonic uterine conditions, especially valuable when chronic pulmonary complications exist. The preparations most used in amenorrhœa are the pills of iron and myrrh, pills of aloes and myrrh, and Griffith's myrrh mixture.

Waring says it imparts an activity to iron and aloes which they do not possess when given singly. Dierbach recommends it.

Pulsatilla was first introduced by Storck. He found by experiments upon the healthy, and when given in amaurosis, that it was apt to bring on the menses. If not a direct emmenagogue, it acts so decidedly upon all the mucous membranes, and, among others, on that of the uterus, that it often proves useful. Singularly enough, it was adopted by Hahnemann, although it is directly antagonistic, and not at all homœopathic to amenorrhœa. It may be given in ʒss to ʒj doses of the tincture, or 3 to 5 grain doses of the extract. It deserves more attention from the regular profession than it has received of late.

Rubia tinctorum (madder) has been reputed to exert a peculiarly powerful action in restoring suppressed menses. Tournefort said that it strongly provoked the menses. Dr. Francis Home pronounced it, after frequent trials, to be the strongest and safest emmenagogue with which he was acquainted, and reports 19 cases of amenorrhœa, of which 14 were cured by it. Its sensible effects were scarcely evident, although he gave it in ʒss or ʒj doses of the powder 4 times a day. Ossiander, Richter and Jahn have also attested its efficacy. Dierbach says it really has a diuretic power, and is conveyed to many parts of the system, because it readily combines with albumen, casein, and especially with phosphate of lime, and may thus excite their functions. The extract is given in pills, or decoction with anise seed ℥ss, and liquorice root ℥ss to ℥ij of madder, in 4 lbs. of water boiled down to one half. Home found that it generally restored the menses about the 12th day after commencing its use. Drs. D. Davis and Dewees added their testimony in its favor. As it possesses no general stimulating property, it is said to be most valuable when there is great irritability of the system, with or without slight febrile paroxysms. Dr. Dewees was only successful with it when used near the expected monthly period. He ordered ℥j, with cloves, gr. xx, in a pint of water, simmered for 15 minutes, then strained and given in ℥iss doses every 3 hours. Pereira says the influence of madder on the general system is exceedingly slight, and its topical effects scarcely obvious, although it may possess mild tonic properties. Wood and Bache say madder was formerly thought to be emmenagogue, and was used in amenorrhœa from hepatic and visceral obstructions, and is still occasionally prescribed in suppressed menses; but physicians generally have no confidence in it in this or any other complaint.

Ruta graveoleus, or common garden rue, from the experiments of Dr. Helie, appears to exert a direct influence on the uterus,

independent of its stimulant and narcotic effects on other parts of the body. The belief in its emmenagogue properties is very ancient, being mentioned by Hippocrates. It is regarded in the East as prejudicial to the fœtus if given to pregnant women, and is occasionally used in England to produce abortion. Dierbach says it is a powerful remedy, whose virtues were well known and highly prized by the ancient Greeks and Romans in irregularities and entire suspension of the menses and various chronic diseases of the uterus, especially when attended with flatulence, spasmodic vomiting, colic, diarrhœa, hysteria, epilepsy and hysterical headache. The solid extract, the confection and balsam, the latter made with equal parts of oil of rue and nutmeg, are the preparations most frequently used. H. C. Wood thinks its action is like that of savin, but less decided; and says in amenorrhæa from uterine atony an especial advantage has been claimed for the combination of the two. He thinks the oil the only proper preparation, to be given in doses of 3 to 6 drops on sugar, or on some mucilaginous vehicle. Stillé says hardly any medicine was more frequently employed, or with greater confidence, than this now neglected plant. It was chiefly used by Hippocrates in uterine affections to promote the lochial discharge, and with aromatic stimulants, in amenorrhœa. Dioscorides regarded it as an emmenagogue, and gave it, with anise, in menstrual colic, and in menstrual epilepsy. Murray claims for it a high value as an anti-hysteric medicine, particularly when there is suppression of the menses, and admits its claims as of high value in menstrual epilepsy. Stillé says in amenorrhœa, independent of plethora and inflammation, it becomes a powerful emmenagogue. He also recommends the oil in doses of from 1 to 6 drops, in some aromatic liquid like essence of mint, or anise, or cloves, or in mucilage, to be repeated every 4 hours. Wood and Bache report the same testimony. Pereira says it is a very popular emmenagogue, especially in hysterical cases; while Haller compared it to assafœtida; and Cullen had no doubt in asserting its anti-spasmodic powers. It formerly enjoyed great celebrity as an anti-spasmodic and emmenagogue, and still retains it among the public. Pereira thinks it will prove serviceable in amenorrhœa and hysteria, and deserves more attention than it now receives. He recommends the confection, oil and syrup of rue—the latter made with 8 or 10 drops of the oil in a few ounces of simple syrup. Dr. Geo. B. Wood reports that it is often used in domestic practice as an emmenagogue, and with some success, especially when the nervous system is also disordered, as in hysteria with amenorrhœa. The principal objection to its use is its disagreeable taste. It probably causes vaso-motor paralysis, like nitrite of amyl.

Senega was first employed in amenorrhœa by Dr. J. Hartshorne, of Philadelphia, (Stillé). He used the decoction for a fortnight before each menstrual period. Dr. Chapman spoke of it as one of the most active, certain and valuable of emmenagogues. Dr. Eberle thought less of it. Dr. G. B. Wood thinks it stimulates the secretions generally, and that it is peculiarly appropriate in those cases in which a deciduous membrane is formed. It is useful when the menses are suppressed by diseases of distant organs, such as chronic bronchitis, &c. Combined with ammonia, it is said to be a remedy of great value. Pereira thinks it moderately excites the vascular system, and promotes the secretions of the kidneys, uterus and bronchial mucous membranes, with a specific influence over the nervous system. A few drops of oil of rue may be added to the syrup of senega, which is generally given in ʒj–ʒij doses; or the solid extracts of both may be given. Senega contains saponin, which, even in no greater quantity than 1 part in 1000 of water, imparts the property of foaming like soap suds when shaken; and probably dissolves both mucus and fibrin, like the alkalies.

Sodæ biborās, or borax, is antacid, refrigerant, diuretic and emmenagogue; in solution it absorbs carbonic acid and dissolves fibrin, albumen, casein and uric acid; gr. iv in ʒj of water dissolves a larger quantity of uric acid deposit than any other alkali, except lithia. It exerts a peculiar sedative and curative effect upon the mucous membranes, and promotes the absorption of fibrinous, albuminous and caseous deposits. In uterine affections, it has long been esteemed by German physicians, and was strongly introduced into British practice by Dr. Copland. Dr. Tyler Smith thinks that it is absorbed into the blood, and then acts upon the spinal cord and nerves of the uterus. It is particularly useful when there is enlargement of the uterus and ulceration of the os, with serious irritation of the bladder, and by its liquefacient properties promotes the evacuation of the menstrual fluid. It is supposed to be particularly useful in amenorrhœa, when there is a dull, earthen or pale, sallow hue of the skin, from the circulation of impoverished blood, more or less tainted with unhealthy elements, and when there are particles of chloasma uterinum on the face or chest, or an outbreak of acne, furuncles, or other skin affections. The ordinary dose in amenorrhœa is from 5 to 40 grains. According to Stillé, Richter regards it as indubitable that borax possesses the power of stimulating the inert uterus, exciting its secretion, and that it deserves to be ranked with the emmenagogues. Wedel, Stark, Leutin, Hufeland, Lobstein and others recalled attention to this almost forgotten property of the medicine. They thought it indicated

in scanty or suppressed menstruation connected with plethora and a morbidly sensitive condition of the nervous system, and gave it in doses of 10 to 15 grains 3 times a day. Wibner vouches for the reality of this virtue, but says that ʒj doses may bring on severe cramps in the lower belly, followed by the appearance of the menses before their regular time. Borax is only soluble in 22 parts of cold water, but by the aid of 1 of glycerine it will dissolve in 12 of water. Glycerine will dissolve its weight of borax, but the glycerate of borax is made 1 to 4, and the honey of borax 1 to 7; but a great improvement is made by dissolving 1 part of borax and 1 of glycerine in 6 of honey. I often use it internally in uterine diseases, and think that it thus exerts the same healthy influence as it does when applied topically in other affections.

Tanacetum, or tansy, according to Stillé, was used in the middle ages, and formed one of the remedies of Hildegarde for amenorrhœa and chronic affections of the abdomen. It is in popular use to overcome irregular and suppressed menstruation, especially when connected with verminal troubles. The oil is given in doses of from 1 to 4 drops. G. B. Wood says it is much more employed in domestic than in medical practice, but the extent to which it is used would seem to prove that it is efficacious. The testimony of many good country practitioners is not wanting to the same effect. The infusion is most relied upon, especially at the period when the menses should appear. Tansy tea is made with 2 ounces of the herb in a pint of boiling water, and given from ʒj to ʒiij at a time. Wood and Bache say it has the medical properties of the aromatic bitters, especially in hysteria and amenorrhœa, but is chiefly used as an anthelmintic.

Strychnia is spoken of by Dr. Bardsley as an effectual remedy in amenorrhœa, and is supported by Dr. Copland, who, however, always used it in combination with aloes for stimulating and strengthening the uterine system.

Turpentine is recommended by H. C. Wood in absolutely passive amenorrhœa, when great local debility exists. He says if glycerine and oil of gaultheria be added to the emulsion, so that half a teaspoonful of one and 1 or 2 drops of the other be taken with each dose, the taste will be almost completely disguised. Enemata of turpentine are strongly recommended by Dr. Elliotson. He succeeded in 3 obstinate cases—one of 18 months standing—by enemata of ʒss of the oil in a pint of barley water, repeated once or twice a day. There was a speedy return of the menses.

ART. III.—*Artificial Placental Respiration—A Suggestion.* By JOHN BARTLETT, M. D., President Chicago Society of Physicians and Surgeons, Chicago, Ill. (Read before the Chicago Society of Physicians and Surgeons, Nov. 12, 1872, with a Postscript.)

There are certain cases of placenta prævia, in which the placenta is extruded, or is extracted before the child. It is the experience of obstetricians in these cases that, as a rule, if the fœtus, then deprived of its means of respiration, be not born within a very short time, say ten minutes, it will be asphyxiated beyond recovery; and the fatal results to children in such cases are shown in the great mortality of the condition. According to the table of Dr. Simpson, 69 per cent. perish.

As a means of saving some of the children born under these unfavorable circumstances, I suggest the following practice: Directly upon the detachment of the placenta, or as soon thereafter as practicable, immerse it in the fresh, warm, defibrinated blood of some animal—as the sheep. Change the blood as often as necessary and practicable, and ærate it and remove from it the accumulating carbonic acid by passing through it a stream of oxygen gas.

The statements, facts and deductions which have led me to believe that such an attempt to conduct artificial placental respiration might be successful here follow: The statements going to show that the life of the fœtus is not momentarily dependent upon the purification of its blood by the circulation of the mother, as given by such authors as Bowman, Carpenter, Barnes and others, are too numerous to be disregarded. Without pretending to any particular research in this direction, I will cite a few of these reports from books now at hand:

Jean Dolaens refers to a woman eight months pregnant, who died of a fever; the next day those who surrounded the corpse saw the infant move in her body for twelve hours, but as no surgeon was at hand, it was allowed pitilessly to perish.

The same author speaks of another instance in which movements were observed in the belly of a woman who had died the preceding evening of apoplexy.

Sennert reports that midwives and spectators plainly saw an infant move in the womb five hours after the mother's death.

John Matthieu states that an infant was born living some hours after the death of the mother.

E. Hagendorn reports that some hours after the death of a woman a child was born alive.

George Delhardingius states that an infant was born, full of life, half an hour after the death of the mother.

The Princess of Schwartzenberg died in Paris from accident, at night in 1810; on the next day a living child was removed from her by Cæsarian section.

C. Stalpart, Vanderweil and Pierre Stalpart attest that at the siege of Perg-op-Zoom, a woman, ready to be confined, went to bring water; she was cut in two by a ball, so that the child, enclosed in its membranes, fell into the water, where it remained for some time, until a soldier passing by observing something move, picked it up and carried it with him. The child was finally withdrawn from the membranes, and was baptised.

Pierre Stalpart removed the ovum from a bitch some time after her death; the pups were kept enclosed in their membranes half an hour, when they appeared to be dead. They were then placed in warm water, when they again gave signs of life.

Mery assures us that he killed a bitch ready to drop her young by withdrawing all her blood; half an hour afterward the pups were taken out alive.

Burns says, "After the mother has been quite dead, the child continues its functions."

Barnes remarks that "the fœtus in lower animals will live some time after birth, if the ovum is not opened."

The *Indian Medical Gazette*, June, 1872, refers to notes of cases of *post mortem* birth, quoted by Dr. J. H. Aveling, in the *Lancet* of April 27th. In one instance the infant was extracted alive from the coffin.

A case is quoted by Simpson, as reported by Mr. Perfect (*Cases in Midwifery*, vol. ii, p. 228), in which the child was born alive five hours after the expulsion of the placenta.

In regard to the possibility of continuance of the life of the child for some time after that of the mother, the opinion of authors, after due consideration of all statements made in reference to it, may be gleaned from their comments and practical direc-

tions in regard to *post mortem* Cæsarian section. I will quote from a standard writer, respectively, of England, France and America.

Ramsbotham says: "If Cæsarian section be performed within 15 or 20 minutes of the mother's decease, the result would probably be favorable."

Cazeaux says: "In several instances the life of infants has been preserved ten minutes, a quarter of an hour, and even half an hour after the last breath of the mother. Although the operation (Cæsarian section) will most frequently be unsuccessful when a longer time has elapsed, it ought to be practised nevertheless; because some facts, of which I do not guarantee the authenticity, seem to prove that the fœtus may maintain its existence during 10, 15, or even 24 hours" (after the death of the mother).

Bedford says: "The case of the Princess of Schwartzenberg, in which the child was extracted on the day following the death of the mother, stands, I believe, uncontradicted. It has received the very general assent of the profession; it is well authenticated."

It may occur to some that the vitality of the fœtus in these cases should be ascribed to what may be called the tolerance of the new-born to the condition of asphyxia, and that these cases should be referred to the category of those remarkable instances in which animation has been restored to the fœtus, after even several hours of apparent death. A careful review of the facts here given will afford reason for believing that the state of asphyxia occurring within a few minutes after interfering with the fœtal circulation by detachment of the placenta, rupture of the cord, ergotism, or the like cause, and in the great majority of cases, without the most active interference of the accoucheur, ending in death, is different from that condition in which a child is born alive, and, in some cases, *active*, it may be, hours after the death of the mother. These two conditions cannot be more strongly contrasted than by the juxtaposition of the two following quotations referring to the one and the other of these states.

Barnes says: "Numerous observations have led me to conclude that the child will be asphyxiated beyond recovery if aërial respiration do not begin within three, or at most five minutes after the stoppage of placental respiration."

Harvey says: "Children have been frequently taken out of the womb alive hours after the death of the mother."

It may be objected to the facts cited above in reference to the life of the fœtus continuing beyond that of the moiher, that in a number of instances the Cæsarian section has been performed 15 minutes after the death of the woman, and that the child had been found dead. To avoid a false inference from these cases, it is necessary to consider the circumstances under which the fœtus was removed; for in many cases of death of the parturient, it happens that the child has been long subjected to causes sufficient to produce its death hours before the dissolution of the mother.

We have, in the cases reported in which the child survived after the rupture of its maternal connection, several classes: In one, the child maintains life in the dead body of the mother; in the second, the fœtus, separated from the mother, retains its relation with the placenta and the liquor amnii—the membranes, floating in water, remaining intact. In the third, the placenta is without the vulva, and the child left in utero.

It would seem impossible to account satisfactorily, in the present state of our knowledge, for the continuance of animation in the fœtus after the mother's death. It may be that the amniotic fluid, accredited by some physiologists with respiratory functions, does its part in sustaining the life of the child. It is quite possible that the changes going on in the tissues of the dead mother may be instrumental in maintaining the respiratory functions of the child. It has been known since 1836 that the blood, even for many hours after death, absorbs oxygen, and gives off carbonic acid, and this process is actually observed to take place through the skin of the corpse. Austin Flint, Jr., says that the tissues of the body, so long as they maintain their integrity of composition, have the property of appropriating oxygen and exhaling carbonic acid. In referring to this power of dead tissues thus to affect chemical changes, he says in words very suggestive of the application now made of them: "These tissues certainly respire." It may be, then, to these *post mortem* respiratory changes that the fœtus owes, in some measure, its continuance of life after the death of the mother.

With regard to those cases in which life is maintained by the

fœtus, the ovum resting in water, the probabilities are that respiratory changes are effected through the agency of the fluids within and without the ovum.

In respect to the case in which the birth of the placenta preceded by some hours that of the living infant, it is one of a series collated by Simpson, in which the expulsion or extraction of the placenta preceded the birth of the child by a considerable interval, varying from 10 minutes to 10 hours. There are 47 of these cases, and in all of them the child was born dead, except in this case of Mr. Perfect. It is worthy of note in this instance that it is the only one in the 47 in which the abdomen presented.

Besides the important fact which this case, if there be no error in the record, establishes, to wit: that the child may be born alive five hours after the detachment of the placenta—it is of interest as suggesting the possibility that in it the very conditions which it is the object of this essay to suggest were fulfilled. May it have been that, the abdominal presentation allowing a free exit to the cord, the fœtal circulation was still carried on through the placenta lying immersed in the outpoured blood of the mother?

Such facts as have been cited demonstrate that the cessation of the circulation of the mother's blood in juxtaposition to that of the fœtus, is not fatal to the child under certain circumstances or conditions. These conditions would appear to be such as would leave the afterbirth in situation, in some measure, to continue its respiratory function.

The placenta is likened by many physiologists to the gills of the fish. In labor, when the detachment of the placenta is equivalent to the removal of the branchiæ of an aquatic animal from their respiratory fluid, the function of respiration ceases. In cases in which the placenta, though no longer washed by the mother's blood, is yet in contact with her still respiring tissues on the one side, and, it may be, with the liquor amnii on the other, such a measure of respiration may go on as will suffice the child for a number of hours. Or when, as in the case reported by the Stalparts, the entire ovum is removed from the mother and deposited in water, the brenchial offices of the placenta may continue. In the lower forms of life, as in the fishes,

the ovum is extruded in the water, surrounded by an outer, loose, jelly-like layer or covering, derived from the cavities of the mother. The nutrition, respiration and emunctory functions of this ovum are conducted through the gelatinous wrapping and the water. In the egg of certain reptiles and birds, the functions of respiration and nutrition are effected through the albumen and the atmosphere. The process by which these functions are conducted is the simple one of absorption. In the human embryo, during the earliest periods of its existence, nourishment is obtained through the simple juxtaposition of the villosities of the chorion with the "soft, velvety," deciduous membrane of the uterus by imbibition.

The relation of the chick in the egg to the nutrient albumen is quite analogous to that of the fœtus in the defibrinated blood in the proposed artificial placental respiration. In the egg, the allantois forms a vascular plexus, the anatomy and function of which are substantially identical with that of the placenta in mammalia. The albumen of the egg, softened and rendered less viscid by the process of incubation, affords nutriment to the embryo, and also acts as a carrier of oxygen and carbonic acid between the chick and the atmosphere. Now, these nutritive and respiratory functions are carried on by means of a placenta; and the relation between this placenta and the albumen is exactly such as I propose to establish between the detached after-birth and a nutrient fluid—that is, the placentæ in the one and the other case are immersed in a fluid from which to absorb oxygen, and to which to give off carbonic acid.

The question which at once occurs in regard to the suggestion here made is, What are the probabilities as to the sufficiency of the exposure of the placental capillaries of the fœtus to the respiratory fluid in which it is proposed to place it?

To estimate these probabilities, it is necessary to consider the character of the connection of the placenta to the uterus.

"In some species of animals," says Dalton, "the connection is exceedingly simple. In the pig, for example, the uterine mucous membrane is everywhere uniformly vascular—its only peculiarity consisting in the presence of numerous transverse folds, which project from its surface—analogous to the valvula conniventes of the small intestines. The external investing membrane

of the egg, which is the allantois, is also smooth, and uniformly vascular like the other; no direct adhesion takes place between them, but the vascular chorion of the fœtus is everywhere closely applied to the vascular mucous membrane of the uterus. By this arrangement, transudation and absorption take place from the blood vessels of the mother by those of the fœtus in sufficient quantity to provide for the nutrition of the latter. The egg (at parturition), displaced from its original position, slides easily forward over the surface of the uterine mucous membrane, and is at last discharged without hæmorrhage or laceration of connecting parts."

Were the relations of the human placenta with the uterus as simple as that here described—the mere apposition of the vascular chorion with a vascular maternal surface—the probabilities of the successful application of the principle, which is the suggestion of this paper, would be very great, inasmuch as the immersion of the ovum in blood would present a more direct opportunity for exhalation, transudation, &c., than actually exists in utero.

Is the relation of the human placenta to the uterus thus simple? This question involves a reference to the two prominent theories of the anatomy of the placenta. The Hunterian theory, as now stated and endorsed by Goodsir, Rees, Simpson, Dalton, Weber, Owen and others, is, that the curling arteries of the uterus enter the placenta and form large sinuses, against the thin walls of which the vascular tufts of the fœtal portion of the placenta project. With this view of the anatomy of the after-birth, embodying the idea that the placenta, after its detachment from the uterus, is in a state of compression, in which the uterine sinuses are closed, the sufficiency of the exposure of the vascular tufts by immersion in blood would be somewhat doubtful. For the blood in which the immersion took place, in order to be applied to the fœtal tufts, would require to be introduced into or through both walls of the sinuses in a state of collapse; but the facts connected with absorption of fluids into the circulation from abraded surfaces of skin, and even from the very small cavities in cellular tissue made by the hypodermic syringe, would lead to the expectation that the 50 square inches of fresh surface, and the like extent of serous surface furnished by the placenta, would permit of sufficient amount of absorption and exhalation to pro-

long for some time the life of the child; especially when the conditions most favorable to exosmosis and endosmosis are presented, to wit: vessels engorged with venous blood on the one side of the membrane and arterial blood on the other.

It is to be borne in mind, however, that the anatomy of the placenta here given is by no means demonstrated, and that such observers as Velpeau, Ramsbotham, Seiler, Meigs and Adams, are confident that no such vessels as Hunter's curling arteries, and Reid's placental cells, exist. Velpeau, in his *Ovologie ou Embryologie Humaine*, says: "I dare to affirm, with greater confidence than ever, that the human placenta is entirely fœtal." And Dr. Meigs, in a number of *post mortem* examinations at full term, assisted by expert anatomists, was unable, after great painstaking, with good light and powerful lenses, to find any trace of the anatomical relations now so generally held as correct.

In regard to the rather recent experiments of Dalton, by which air was made to pass from the uterine arteries deep into the placenta, it is possible that he but committed the mistake of a century ago—that is, ruptured the maternal vessels, and through the rents inflated the loose tissues of the placenta. It is rather remarkable that so many should regard Dalton's experiments as decisive, when Weber, who had, years ago, made similar ones, states that in this method of inflating the veins, a certain portion of the placenta is found to have been distended with the air of the blowpipe, which escapes from openings in accidentally broken vessels.

Dr. Meigs says: "The placenta sits on the womb as a basis to rest on, and as a living surface out of which to take oxygen and liquor sanguinis, and that the placenta is wholly and solely a product of the living ovum, with which the womb has no part nor lot, except to afford a point to rest on, and a feeding ground from which to procure the alible materials of the ovum," Again he says: "There is, I fully believe, but one law of connection betwixt the embryo and its mammiferous parent."

The views of Velpeau, Meigs, and others of their day, may be regarded by some as not having the weight of the more recent investigations of Dalton. Dr. J. Braxton Hicks, President of the London Obstetrical Society, as late as last May [1872], read a paper on the *Anatomy of the Placenta*, wherein he declared that the Hunterian theory of its formation was palpably false,

and that the simpler views of its relation to the uterus, as given by Velpeau and others, were correct. Dissections of four specimens were given to sustain his opinions.

With this view of the anatomy of the placenta, regarding the surface commonly called maternal, as the fœtal points of attachment to the mother, it becomes highly probable that the immersion of the after-birth in arterial blood would guarantee the proper changes in the blood of the fœtus.

I cannot drop the subject of the anatomy of the placenta without calling attention to the language of Mr. Owen, an advocate of the cellular constriction, in regard to the relation of the placental tufts to the blood which aerates that of the fœtus. He says the placental inter-communication between the fœtus and mother is carried on by the contact of the fœtal capillaries with *maternal extravasated blood.* In this language my suggestion is foreshadowed.

In the life history of plants and animals facts may be noted somewhat analogous to this transplanting of the placenta from its natural bed to a new site. Plants with root filaments wonderful in number and extent, when rudely plucked from their bed, maintain their vitality for a longer or shorter time if kept in water. Nor is this illustration entirely without a parallel in the animal organization. *A priori*, it would be deemed that the severance of the dermoid, bony, arterial, venous and nervous connections of a portion of the body—as a finger—would debar it from reconnection; but the experience of surgeons demonstrates that the mere apposition of the part removed, upon a fresh surface, may lead to its immediate and vital union.

The anabas, a peculiar fish of Ceylon, has the power of remaining some time out of its element. On the sides of the head are reservoirs containing a temporary supply of water for the moisture and respiratory function of the gills while the animal goes out into the air.

Artificial placental respiration, if practicable, would be found useful in some of those cases of placenta prævia in which Dr. Simpson recommends the detachment of the placenta—as when the hemorrhage is alarming, the os uteri rigid and undilatable, and yet sufficiently open to admit of the extraction of the after-birth; when, because of escape of liquor amnii the uterus is too

contracted to admit of turning; when the pelvis or passages are originally contracted, in extracting the head; in cases of exhaustion, and in cases where the placenta is detached by uterine efforts, &c. The artificial respiration might also, in cases of still-born children, where the placenta is extended or lying loose in the passages of the mother, offer an additional chance of resuscitation.

In practice, except in cases in which the diagnosis of placenta prævia had been made out, and unusual forecast had been used, it would doubtless result that no blood would be at hand in which to immerse the placenta. While blood, for the purposes intended, on account of its extraordinary capacity for both oxygen and carbonic acid, is to be desired, it is probable that some artificial fluid, easy of preparation, might be found to answer a good purpose. The phosphate of soda, one of the constituents of the blood, added to water in very small quantities, doubles its capacity for carbonic acid, and an unusual supply of oxygen might be kept up in the water by simply passing air through it, by means of an ordinary syringe. In some cases, the mother's own blood might be utilized.

Postscript. September 1, 1875.—Since writing the preceding paper, the following reports, taken from the *Edinburg Medical Journal*, have been kindly furnished me by Dr. M. W. Wood, U. S. A. They contain facts which seem to elevate my suggestion from a theory to a practice, and at the same time to show that co-laborers on the other side of the water, namely, Drs. Taylor, Bell and Woodhead, have, in a measure, anticipated me in the years 1864, 1866 and 1868:

Proceedings of the Edinburgh Obstetrical Society, Nov. 23, 1864.—The Secretary read the following notes of a twin case which occurred the previous week in the Royal Maternity Hospital, drawn up by Mr. Taylor, house surgeon:

The patient, K. F., is married, and has had one child, which is now alive, and will be 3 years old next January. Her menstruations have never been regular, but the period of the last was the end of April. The period of quickening, middle of August; the duration of 1st stage of labor, 8 hours; of 2d stage of labor, 20 minutes; of 3d stage of labor, 3 minutes. The head of first and larger child presented in first position, and simultaneously with birth of head was presented the unbroken

caul of second child. On being born, the first child showed very little signs of vitality, and that only by sluggishly contracting one or more of its limbs. The stupor was unaffected by the copious administration of cold water. Meantime, the second and smaller child was being expelled—footling presentation. It exhibited far greater signs of vigor, and was more sensitive to administration of cold water. The cords were both pulsating strongly, and at end of three minutes the placenta was withdrawn.

Although satisfied that neither of the children could be fully resuscitated, I determined to see how long life could be maintained, and for this purpose immersed both children in warm water (temperature, 100°F.), and during the first twenty minutes occasionally plunged them into cold water, immediately replacing them in the warm. During these operations the smaller child gave several violent spasmodic heaves, but never seemed to breathe.

At the end of twenty minutes, we found that both cords were still feebly beating; and, by way of experiment, we endeavored to restore the natural heat by immersing the placenta into a separate basin of warm water (temperature, 110°F). The pulsations then became more distinct and frequent, and did not cease until the end of 43 minutes after birth. At that time we found that the systolic action was still distinctly visible in the chest of smaller child. It was also synchronous with that of the larger child, as ascertained by auscultation. Looking, therefore, at the one and listening to the other, we found the pulsations to be as follows:

At the end of	44	minutes	.....	39	beats.
" "	50	"	.....	36	"
" "	55	"	.....	34	"
" "	60	"	.....	30	"
(Placenta removed from warm water.)					
" "	60	minutes	.....	28	beats.
" "	70	"	.....	26	"
(Children dried and wrapped in hot flannels.)					
At the end of	73	minutes	.....	15	beats.
" "	75	"	smaller child.....	00	"
			larger child.....	12	" feebly.
" "	80	"	.....	00	"

The mother fell down five steps of a stair on the morning of the day she was confined, and immediately thereafter the pains began.

At the meeting of the Edinburgh Obstetrical Society, Jan. 24th, 1866, the discussion being upon placenta prævia, cases in which the placenta was first delivered, Dr. Charles Bell sug-

gested that under such circumstances the after-birth should be placed in hot milk.

At a session of the same Society, June 24th, 1868, Dr. Tidey said that Dr. Woodhead had reported a case in which the placenta had been first expelled; and the child had been kept alive for some hours by placing the placenta in warm water.

As bearing upon the matter discussed in the foregoing pages, I append the recent experiments as to the length of time which may elapse before blood loses its fitness for transfusion, recently detailed before the Society of Physicians and Surgeons by Prof. J. W. Freer. The fact that the integrity of the blood may continue as long as 23 hours at the ordinary temperature of 60°F, and as long as 72 hours at the temperature of a refrigerator, taken in connection with the statement of Prof. Flint—that tissues of the dead body respire—goes far toward an elucidation of those cases in which the fœtus in utero has survived the mother. And the suggestion of Dr. Freer, that blood may be saved up for future use, has a bearing upon the practicability of the plan which it has been the purpose of this paper to recommend:

The following experiments have been made in order to ascertain the length of time that blood retains its nutritive and vivifying properties after being drawn from the living vessels:

First. Wednesday, April 21st. A healthy, medium-sized dog was transfused with 10 ounces of dog's venous blood that had been drawn seven hours, and during that time exposed to the temperature of a refrigerator. The operation was preceded by moderate depletion. No bad symptoms followed, and the animal remains healthy.

Second. Friday, April 23d. A healthy dog was transfused without previous depletion, with eight ounces of dog's arterial blood, a part of which had been drawn seventeen and a part twenty-three hours, and exposed to the temperature of the laboratory—about 60°F. No bad symptoms followed, and the animal remains well.

Third. Wednesday, April 28th. A medium-sized dog was first bled from the left carotid artery to a condition of insensibility, twenty ounces having been drawn, and then transfused with dog's venous blood that had been kept in a refrigerator seventeen hours. Eight ounces were returned. He resuscitated as promptly as usual with recent blood, and no bad symptoms followed.

Fourth. A healthy medium-sized dog was bled from carotid artery 32 ounces. Insensibility was complete, and a few moments before transfusion respiration had ceased. He was then transfused with ten ounces of dog's venous blood that had been drawn and kept in a refrigerator 48 hours. Resuscitation was as prompt as with fresh blood, although he died in less than nine hours.

Fifth. May 3d. A small young dog was first bled six ounces, and then injected with seven ounces of dog's arterial blood that had been in the refrigerator 72 hours. No morbid symptoms had followed as late as May 15th.

These experiments have served to show that red corpuscles, although acknowledged to be organized, are not subject to the laws that govern the vital existence of other tissues of the body, for these latter when separated from their living connections, but for a few moments, are thenceforth incapable of resuming their original functions.

The practical value of a knowledge of these facts, we believe to be of great importance in relation to the operation of blood transfusion; for this knowledge removes apprehension concerning the integrity of the blood when transfusing leisurely, which is essential to successful avoidance of distressing, if not dangerous symptoms. Also, it renders it possible to save up blood for future use, the convenience of which must be apparent, particularly if we are justified in using animal as well as human blood for such purposes.

ART. IV.—*Retro-Uterine Hæmatocele—A Gynœcological Study.* By GEORGE T. HARRISON, M. A., M. D., Assistant Surgeon to the Woman's Hospital of the State of New York, New York City.

(Concluded from October No., page 499.)

Let us now investigate more closely the organs and vascular parts which may serve as the source of the effusion of blood in hæmatocele. The hemorrhage must originate from some point within the pelvic excavation. Hemorrhages, from parts situated higher above, as Schröeder correctly observes, "can indeed lead to a fatal blood effusion in the abdominal cavity, even to the formation of a blood coagulum in Douglas' cul de-sac, but never cause the characteristic tumor displacing the uterus forwards."

The first organs to which our attention would naturally be directed from *a priori* considerations, are the ovaries, as they are exposed to more or less intense and periodically recurring congestions at the time of the maturation of the ova. Under no circumstances, however, can we admit that the rupture of a Graafian follicle at the time of menstruation can give rise to a hemorrhage of any moment, as the follicle closes again immediately after the escape of the ovum. Dr. Fritsch* quotes a direct observation made by Tüngel, which bears immediately upon this point: The latter found, in a case in which atresia of both Fallopian tubes existed, a corpus luteum that had just originated without a drop of blood on the ovary or in the abdominal cavity. Only when the seat of organic disease, will the ovaries ever prove the source of the hemorrhage. That mere chronic congestion, as M. Courty† believes, can be the most active cause of these hemorrhages is not at all demonstrated; but that the affection known as apoplexy or hæmatoma of the ovary, caused by a hemorrhagic infiltration into the ovarian stroma, may be the source of a hemorrhage leading to hæmatocele, as Dr. Fritsch maintains is more in accordance with the facts observed in repeated autopsies. As this latter author remarks, "such a hæmatoma will, when it is large, be a kind of retention cyst and burst when the centrifugal force is too great, that is when the substrata of the organ, perhaps pathologically altered, are incapable of resistance."

Secondly, the Fallopian tubes may occasionally give origin to hæmatocele, as was mentioned before Gallard and others, in explaining the etiology of hæmatocele, had recourse to tubal pregnancy as an important factor. Both Gallard and Virchow observed that after menstruation had been wanting several times in succession, or at least had been irregular, hæmatocele was developed; moreover that the patients had sensations as if they were pregnant. Though necessarily a very rare event, it cannot be denied, from what post-mortem research has shown in some cases, that the rupture occurring in tubal pregnancy at an

*Vide *Sammlung Klinischer Vorträge, &c.*, von R. Volkmann. No. 56. Die retro-uterine hæmatocele, von Dr. Fritsch, s 455.

†*Traité Pratique des Maladies de l'Utérus, &c.*, deuxième edition. Sec. partie, p. 1042.

early period may give rise to a hæmatocele under the following circumstances, *i. e.* if Douglas' cul-de-sac be previously capsulated, or if the bleeding takes place slowly and time be allowed for the formation of pseudo-membranes, shutting off Douglas' cul-de-sac from the remainder of the abdominal cavity, or when the bleeding ceases, and, after the formation of the closed space, again recurs.

But independently of pregnancy, the oviducts may give rise to a copious hemorrhage leading to hæmatocele, especially when the mucous membrane lining them is the seat of chronic inflammation. This mucous membrane under normal relations, it is to be recollected, is very vascular and projects into an exceedingly complicated system of papillæ and folds. The proliferation of these papillæ and folds, attendant upon the inflammation, may result in their being firmly blended together so as to produce atresia; and, on the other hand, as this proliferation naturally involves the new formation of blood-vessels, hemorrhage may ensue, and, as the blood is prevented from escaping by the atresia, bursting of the tube may follow. Tilt* asserts that the oviducts may adhere at some point and be prevented, at the time of the dehiscence of the Graafian follicle, from embracing the ovary with their fimbriated extremities; and, therefore, when the rupture is of unusual extent, so large a quantity of blood may be effused as to entirely fill the pelvis.

This explanation must, however, be rejected for two reasons: In the first place, the old theory that the Fallopian tube grasps the ovary with its fimbriæ when the ovule escapes from the ruptured follicle, has now no longer any support, since Bischoff† and Henle‡ showed how utterly untenable the hypothesis was; and, in the second place, the wound produced by ovulation is too slight to cause any considerable amount of bleeding. But mediately, the oviducts may serve as the source of the hemorrhage by allowing the blood to regurgitate through them into the abdominal cavity under any of the conditions which cause a retentio mensium, the chief of these being obstructions of the vulvo-uterine canal, and excessive accumulations of blood in the uterus and

**Uterine and Ovarian Inflammation.* London, 1862, p. 153.
†*Entwickelungs geschichte*, p. 28.
‡*Handbuch der s. Anatomie.* Engemeidelehre 2te, auf. p. 490.

tubes. This process, maintained by Voisin, and invoked by Bernutz and Goupil, as a potent causal factor, and which the observations of Olshausen, Krieger, Barnes and others as they thought, tended to confirm, must, however, be regarded as very improbable. M. Puech pointed out that under conditions the most favorable for the theory of reflux, that it was excessively rare, and Snow Beck draws attention to the fact that, in the great number of cases of hæmatocele so few are known in which the blood made its way through the Fallopian tubes into the pelvic cavity; although, in many cases, the internal pressure was so great, that it caused rupture of the fundus, and yet the blood had not escaped through the oviducts into the peritoneal cavity.

Thirdly. The rich network of veins pervading the broad ligaments, may also under rare circumstances be regarded as the source of hemorrhage. From repeated pregnancies, or any conditions which prevent a return of blood from the pelvic organs into the ascending vena cava, varicose distensions of these veins are liable to occur; and hence, when, from the operation of any transient cause, an intense engorgement of these vessels is produced, rupture and consecutive bleeding may take place, especially, as it is a known fact, that varicose veins, from the pathological alteration of their coats, have lost, to a great degree, their resisting power. As a rule, hemorrhages occurring at this point only give rise to a subperitoneal hæmatoma; but under favoring conditions, the peritoneal investment may give way and a hæmatocele result. Voisin pointed out the circumstance that, while the blood in the ovaries and Fallopian tubes is effused slowly and from capillary vessels, the bleeding from these larger varicose veins must necessarily be more copious. A vein bursting here is much more apt, therefore, to lead to a fatal hemorrhage into the abdominal cavity than give rise to hæmatocele. And such cases have been described by Simpson, Voisin, Ollivier and Scanzoni.

In the *fourth place*, the blood forming the hæmatocele may be derived from a pelvi-peritonitis hemorrhagica, and this source, as all, save Virchow, regards as the usual one. As the result of such a partial peritonitis, not only may Douglas' cul-de-sac be segregated from the remaining portion of the abdominal cavity

by pseudo-membranes, but also a hemorrhage readily occur from the new formed vessels of the pseudo-membranous layers in Douglas' space. That Virchow is right, in thus vindicating for this source its claim to be considered the potent factor in the production of the greater part of hæmatoceles, we are convinced most decidedly from attentive clinical observations. It is true that many, nay, the majority of observers, have been led to like conclusions with Olshausen* who says, "Every one who has a knowledge of the disease from observations made on the living, certainly adheres to the original explanation of Nèlaton; consequently assumes the catamenial mode of origin, and regards the effusion as primary, the pelvi-peritonitis as secondary and not necessary." Virchow,† however, endeavors to show that the clinical picture presents no phenomena that militate against his views, as follows:

"The very noticeable circumstance, to be sure, which all observers with one accord emphasize, that the tumor usually begins suddenly with a menstruation and grows paroxysmally with the following catamenial periods, does not contradict such an explanation. It seems indeed more suitable, with Langier,‡ to drive all the blood directly out of the Graafian follicle ruptured in ovulation, but experience has confirmed this view so little that many observers who have had opportunities of witnessing autopsies, have attained to the conviction that a rupture of larger vessels in the ligamenta lata was the cause of the hemorrhage. It is also not a matter of doubt, that the menstrual fluxion is not limited to the vessels of the Graafian follicle or the tubes, but effects simultaneously all the vessels of the neighborhood; and when, then, an unusual vascularity exists in the Douglas' space, either of the peritoneum or of the new formed pseudo-membranes, hemorrhage can occur just as readily here as in the ovary or tubes. The circumstance, overlooked by the earlier observers, that similar conditions occur in men also, although in not so great a degree, speaks decidedly in favor of the view brought forward by myself."

I give now the notes of two cases, the first of which possesses this special interest: that the hæmatocele did not occur in connection with menstruation.

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*L. c., p. 31.

†L. c., p. 152.

‡*Gaz. Med.* de Paris, 1855, p. 151.

Feb. 15, 1871.—Mrs. A. F. was admitted into the Woman's Hospital with the following history: menstruation appeared first at the age of 18; and until within the past two years showed no abnormal features. She was married at the age of 20; her husband died not long after marriage. At the age of 27, married the second time. Has never been pregnant. About two years ago, began to suffer with dysmenorrhœa. Leucorrhœa has also been a symptom of late. Three months ago, was seized with a severe pain in the hypogastric region, which confined her to bed two weeks. The pain was so intense that it could only be alleviated by large doses of opium internally, and the application of hot poultices to the abdomen. The period recurs regularly, but is scanty, and the dysmenorrhœa now gives rise to more suffering; bowels constipated; appetite poor.

Feb. 23.—Examined by Dr. Emmet, who diagnosticated a chronic perimetric inflammation.

March 2.—Patient left the hospital on account of domestic reasons.

January 13, 1873.—Re-admitted into the hospital. She came now under my immediate care and observation, as the Assistant Surgeon on duty at the time—Dr. Emmet seeing her from time to time, according to the routine of the hospital, and giving me the benefit of his wise counsel and ripe experience. The period is now more protracted and copious than formerly, and is attended with similar pains. Dr. Emmet's examination showed the existence of retroversion of the uterus with pseudo-membranous attachments to the rectum, the result of partial peritonitis. As part of the treatment, a pessary was introduced into the vagina with the hope that by its lever-like action, the pseudo-ligaments would be gradually stretched, and undergo atrophy and the uterus ultimately be restored to its normal position. It was proven, however, that there existed so much tenderness in the posterior fornix vaginæ, that no pessary that could be placed *in situ* could be worn for any length of time, though the shape was modified repeatedly to meet the exigencies of the case.

January 31.—The last time the pessary was adjusted, the patient suffered a few hours afterwards a good deal of pain, and according to instruction in that event, renewed it. The tissues posterior to the uterus were so sensitive on pressure that the patient was ordered to keep her bed for several days, and use repeated injections of hot water.

Feb. 5.—As the patient walked into the operating room, I was struck with her exceedingly pallid countenance, and entire change of appearance since my last visit. She says that she has been feeling worse for the past few days, has now a bearing-

down sensation in the pelvis, difficulty of defecation and urination; feels very weak and faint; though she has walked but a few steps assisted by the nurse, her bed being in the adjacent ward but a short distance away. Examination per vaginam revealed the existence of a large globular elastic tumor which has dislocated the uterus forwards against the symphysis pelvis, and is just behind the portio vaginails, pressing the posterior fornix vaginæ downwards, and, as investigation *per rectum* shows, encroaching largely on the cavity of the latter. Bimanual palpation demonstrated clearly that the tumor was distinct from the uterus, and seated immediately posterior to it. There was no elevation of temperature or other evidence of fever. There has been no discharge of blood through the vaginæ, and this is not the time for the recurrence of the menstrual period. It should be remarked that the colon was found a day or two afterwards loaded with fœcal matter, which was dislodged with difficulty by copious injections, and it is possible that this accumulation may have had some bearing upon the etiology. The rapid manner in which the extravasated blood was absorbed in this case was very remarkable, and tended to confirm the truth of Voisin's statement that "the tumor from the moment of its development shows the endeavor to diminish."

The other case mentioned is the following:

Miss B. R. came under my care *July* 19th, 1872. The chief points in the anamnesis are as follows: Is 36 years of age; menstruation appeared first at the age of 15; recurred regularly, and showed no deviations from a healthy standard until about a year ago, when the flow began to be too free and too protracted. Last Christmas, had an attack of illness during which she suffered greatly from nausea and vomiting, and was forced to keep her bed for several days. When the period came on next after this attack, it lasted longer than usual, and was more profuse. On the 15th of *January*, had a severe attack of menorrhagia, and since then has hardly been free from 'a show.'

Status præseus.—The patient is a woman of large frame and strong muscular development, but is exceedingly pale and anæmic, and has that peculiar hue of complexion consequent upon loss of blood; complains of want of appetite and almost constant nausea; examination per vaginam reveals the fact that the uterus is enlarged and inclined backwards, being attached to the rectum by pseudo-membranes. The symptoms indicated the existence of an intra-uterine polypus.

September 6.—Sponge tent introduced, followed by a second on the succeeding day.

On the 8th, after withdrawing the tent and passing the finger

into the uterine cavity, quite a large polypus was detected, which was promptly removed by the scissors. The uterine cavity was then injected with Churchill's strong tincture of iodine. The hemorrhage was at once arrested, and the patient began now to recover health and strength very rapidly.

On the 15th of *November*, a little more than two months after the removal of the polypus, the period came on regularly and lasted six days without any unusual symptoms, being the third time she has menstruated since the operation. On the 6th day, however, she went out and exposed herself to the inclemency of the weather, when a sudden suppressio mensium ensued attended with an intense abdominal pain. Patient was forced to take to bed, and suffered greatly with difficulty in urination and defecation; had also a sensation of faintness and extreme debility.

November 27.—She came to my office to seek advice, looking exceedingly pale and ill. Examination per vaginam gave the familiar picture of hæmatocele—the uterine being pushed forward towards the symphysis pubis, while immediately behind the portio vaginalis the exploring finger came in contact with a large firm and somewhat globular tumor, filling up the pelvis to a great extent, and necessarily interferring with the functions of bladder and rectum. There was no elevation of temperature and the vaginal examination gave rise to no pain. Patient advised to keep her bed, on returning home, for some time. Absorption took place rapidly and she is now in good health.

The fair and legitimate inference to be drawn from the clinical history of these two cases is, we think, that here was a primary closure of Douglas's cul-de-sac, and secondarily an effusion of blood into the closed space thus formed; and that the partial pelvi-peritonitis, recognized in each case prior to the development of the hæmatocele, not only furnished the pseudo-membranes roofing the Douglas' space, but also gave origin to the hemorrhage in the way described by Dolbean, Virchow and Ferber.

A third case from our practice might be cited to still further illustrate this point, where a patient with chronic peritonitis came under our care a short time before the development of the hæmatocele, and where we had the opportunity of studying the clinical phenomena from the time of the attack with great advantage. We would also refer the reader to an interesting case (we allude to case No. 3) reported by Dr. C. C. Lee, in a paper entitled "*Remarks upon the Diagnosis of Pelvic Hœmatocele,*"

and published in the August number (1873) of *American Journal of Obstetrics*. Though Dr. Lee does not express an opinion in regard to the source of the hemorrhage, we think it very probable that a peritonitis hemorrhagica was the cause of the bleeding.

In the second case narrated it might be objected that as the hæmatocele followed immediately upon a suppressio mensium the explanation is to be sought in a spastic closure of the cervix uteri and a regurgitation through the Fallopian tubes of the blood accumulated in the cavity of the uterus into the pelvic cavity. The difficulties in the way of such an explanation, however, are so many and so obvious that it is not worth while to enter upon its refutation. Suffice it to say, that no facts have been brought forward by its chief advocate, Bernutz, or others, to make it at all probable; while, on the contrary, all analogies are opposed to it, and as we have seen, under circumstances the most favorable for the theory of reflux, where hæmatometra with atresia cervicis existed, such a process is the rarest kind of event.

In regard to the frequency of hæmatocele, the statements made by different authorities are widely at variance. This is shown by reference to the discussion which took place at the meeting of the London Obstetrical Society in May, 1872, when Dr. Meadows read a paper upon this subject. While Meadows, Tilt, and others regarded it as infrequent, and thought that other pelvic affections were often erroneously diagnosticated as pelvic hamatoceles, Barnes insisted upon its frequent occurrence, and in this view was sustained by the experience of Graily Hewitt, Greenholgl, and others. Braxton Hicks* remarked that "if clinical symptoms have any value the milder forms of the affection are not unusual." French observers generally considered it a rare affection. Among German writers the same discrepancy of opinion prevails as among English authorities Seifert, of Prague, among 1272 gynæcological cases, found 66 hæmatoceles; Olshausen, among 1145, found 34. Weber, of Petersburg, found 20 per cent. of his patients affected with hæmatocele. Frankenhäuser, of Zürich, according to the statement of his assistant, Dr. J. Kuhn,† saw, in the course of two

**Transactions Obstetrical Society of London*, vol. iii. p. 172.

†*Ueber Blutergüsse in die breiten Mutterbänder*, u. s. w. von Dr. J. Kuhn, Zürich, 1874.

and a half years at the stationary clinique in Zürich, 15 pelvic blood effusions. Dr. Fritsch says that 15-20 cases of hæmatocele are treated every year in the policlinique of Halle. It must be borne in mind that in none of the statistical results given by these authors is the distinction observed between hæmatoceles and hæmatomata. Still, after deducting these latter, we will have a large percentage of true hæmatoceles. On the other hand, Crede, of Leipzig, in 293 cases, saw not a single case of hæmatocele. Hugenberger, among 3,801 gynæcological cases found not a case of hæmatocele. Nor was Spiegelberg, of Breslau, more fortunate in eliciting a case among his 363 patients treated within a certain time. Scanzoni declares that after the expiration of twenty-eight years of practice he has seen but eight cases.

The explanation of this contrariety of opinion is not easy; possibly it may be found by a reference to the following facts: In the *first place*, it seems to be undoubtedly true that hæmatoceles occur more frequently in some localities than in others. Prof. Frankenhäuser was struck with the circumstance that while he resided in Jena hæmatocele rarely came under his notice, but that on his removal to Zürich he found it of comparatively frequent occurrence. *Secondly*, if it be true, as Meadows, Tilt, and Scanzoni insist, that many cases of pelvi-peritonitis with exudations have been taken for hæmatoceles, it is also true that many hæmatoceles have been falsely regarded as exudations the result of peritonitis. Niemeyer admitted that he himself had committed such errors of diagnosis as the latter. *Thirdly*, Hermann, Beigel, and Fritsch observed that the disease occurred more frequently among the poorer classes of women than among their sisters in better circumstances; hence, remarks the latter, "gynæcologists who have chiefly a consulting practice in the higher ranks of society can see hæmatoceles rarely, and only accidentally, since those attacked by it are mostly poor women who live by the labor of their hands."

There is no justification, then, for the scepticism of Scanzoni, who not only calls in question the accuracy of diagnosis on the part of those who report a large number of cases as having come under their observation, but even impugns their honesty. We agree with Olshausen, when he says,* "it has been the fate of

*L. c. p. 25.

this affection, with respect to its diagnosis, to have met with a rare scepticism, even on the part of specialists. Most physicians demand for a diagnosis that the blood be made perceptible to the eye either by puncture or autopsy. This requirement, however, is scarcely more authorized than the assertion that an abscess can not be diagnosticated until it is opened, or a pregnancy until the child is seen."

All writers are in accord in regard to the time of life when hæmatocele most frequently comes under observation—i. e., when the sexual functions are in greatest activity, consequently from the twentieth to the fortieth year of age. In Tuckwell's* 79 patients the following are the facts in regard to the ages respectively at which the affection occurred:

Under 20 years	4 cases.
Between 20 and 30 years	51 "
" 30 " 35 "	17 "
" 37 " 40 "	6 "
At the age of 40 years	1 cases.
Total	79 cases.

But it would be erroneous to assume that the continuance of the menstrual process is a necessary condition for the origin of a hæmatocele, as Ferber describes a case of a woman 53 years old who had not menstruated for eight years in whom the affection was developed.

Many French authors, and especially Gallard, laid emphasis upon the exercise of coitus during menstruation as a potent cause of the disease. Voisin, among 36 cases, found 7 whose origin was due to this cause. Beigel gives a very interesting case of this kind. Scanzoni calls attention to exposure to cold during menstruation as a cause of hæmatocele, which he thinks has not been sufficiently noticed in the etiology. Richet regards obstinate constipation as an important etiological factor. We will not undertake to decide whether diseases which occasion an abnormal composition of the blood, as icterus gravis, purpura, scarlatina, variola, measles, &c., can give rise to hæmatocele or not. If these cachectic hæmatoceles do occur they must be excessively rare.

The symptoms have already sufficiently engaged our attention, and, moreover, in the differential diagnosis to which we now pass

*_Effusions of Blood in the neighborhood of the Uterus_, 1863.

will be mentioned what may be further said upon this branch of our subject.

The affections with which hæmatocele are most apt to be confounded, and which must be excluded to attain to a certain diagnosis, are exudations from perimetritis or parametritis, hæmatomata, intra or extra gravidity, small ovarian cysts in Douglas' cul-de-sac, fibroid tumors of the uterus. It is chiefly with a perimetric exudation that hæmatocele is likely to be confounded, the usual seat of the parametric exudation in one or the other of the broad ligaments giving sufficient ground of distinction; and it is only in the comparatively rare case when the parametric exudation is situated in the post-uterine connective tissue that error is likely to arise. These inflammatory exudations and hæmatocele have a number of symptoms in common, due to the existence of a tumor in the pelvis—i. e., pain in the hypogastric region, difficulty in the evacuation of the contents of the rectum, a sensation of bearing-down pain, radiating to the leg from pressure on the plexus sacralis. Characteristic, however, for hæmatocele is the sudden onset of anæmia and the rapid course.

It is not true, as certain writers maintain, that hæmatocele suddenly attacks an individual in apparently good health. It is always preceded by pelvic pains indicating pelvi-peritonitis, by menstrual irregularities, and there is consequently obvious impairment of health in nearly all cases; but still the characteristic phenomena are sudden in their invasion.

The relations of pulse and temperature will in nearly every instance give such characteristic features as to furnish certain means of distinction between the two conditions. Hæmatocele runs its course generally without fever; and if the temperature mounts up to 102° F., it is of a short duration, and the fever exhibits great irregularity. There is no typical fever with morning remissions and evening exacerbations. In the case of the inflammatory exudations, the febrile movements are often for weeks very regular and exhibit a rhythmical march—a morning remission—when the temperature may even be normal, followed in the evening by a rise of temperature of two to four degrees, F. Whilst the pulse in hæmatocele is small and frequent in the beginning, it soon becomes slow again. In the case of the exudations, on the other hand, the pulse conforms to the condition of

the fever, and is full and strong. Those writers, therefore, who speak of a high range of thermometer in this affection must have formed their opinions from *a priori* deductions rather than from careful observation, at the bedside. The error has doubtless originated from the assumption of a secondary peritonitis.

The differential diagnosis between hæmatocele and hæmatoma presents many difficulties; but still the distinction can usually be clinically established very certainly. The labors in this direction of Dr. Jacob Kuhn,* under the guidance of Frankenhäuser, of Zürich, are very laudable and have assisted materially in throwing light on the subject. He gives a very interesting account of two cases of hæmatoma, in which the diagnosis was confirmed by autopsy. We shall make the result of his investigations the basis of our remarks on this point. The necessity of making this differential diagnosis is the more important, as facts are continually multiplying which tend to show that hæmatoma occurs more frequently at other times than during the puerperal state than was formerly believed. If it has been ascertained from the history of the case that an effusion of blood has taken place, physical exploration will give the following criteria: If the tumor lies in front of the uterus and presses the anterior fornix vaginæ downwards, and the posterior fornix vaginæ is at the same time free, we have in all probability a hæmatoma and not a hæmatocele ante-uterina before us. It is a very rare event for a hæmatocele, as we have seen, to form previously in the excavatio ante-uterina; it is generally an attendant phenomenon upon retro-uterine hæmatocele. Where a primary ante-uterine hæmatocele does form, it does not press down the anterior fornix vaginæ to the same extent as the hæmatoma. Those cases in which a tumor is formed on one side of the uterus, which projects over to the other side by a bridge, must be considered as hæmatomata and not hæmatoceles. This bridge, either before or behind the uterus, uniting also two blood tumors situated at the side of the uterus, and the level of which is lower than that of the tumors united together is one of the characteristic symptoms of hæmatoma and argues against hæmatocele.

This condition is of very great value in the case of a hæmatoma on one side, when it extends through the bridge in a later attack

*L. c., s. 97.

to the other side, and there forms a second tumor. Kuhn reports three such cases. From the vagina a hæmatocele is perceived as a globular tumor, and is smooth because it is bounded by the peritoneum, situated as it is in Douglas' cul-de-sac. In the beginning it is doughy, but soon becomes very hard, and gives then everywhere the same resistance. A hæmatoma is not smoothly defined below; it feels uneven and nodular, because the blood is not effused uniformly into the connective tissue. Through the abdominal walls it feels like a tumor with a smooth roof, which may be circumscribed with exactness because its natural boundary is formed by the elevated peritoneum—just the inverse of the condition found in hæmatocele, which is not so exactly defined by its roof of pseudo-membranes. Hæmatoma is, in the beginning, of a doughy consistence, and later the degree of hardening is irregular and varied; the blood remains fluid a longer time than in hæmatocele; the feeling is not always everywhere the same. The seat can be around the uterus; generally it extends to a greater or less degree into the broad ligaments, and projects from them before and behind the uterus, from one side to the other. In hæmatocele, as in hæmatoma, the uterus can be elevated or depressed, and the view is not correct that the hæmatoma elevates the uterus and hæmatocele depresses it. If the Douglas' cul-de-sac projects far downwards (in one case we saw this cul-de-sac co-extensive in depth with the vagina), and this is individually quite different, and if the utero-sacral ligaments are lax the uterus can be elevated by a retro-uterine hæmatocele. In hæmatocele the uterus is displaced towards the symphysis, the fundus uteri deviating the most, the cervical portion being more or less fixed by the utero-secral ligaments—an antepositio uteri originates. In a hæmatoma the uterus is displaced to the opposite side, when the effusion of blood attains any sort of size. It is displaced more or less to one side or to the other, because the hæmatoma takes its origin in most cases in one broad ligament. But in spite of this displacement, the uterus is drawn up on the tumor because the peritoneum is not everywhere with equal ease lifted from the uterus, but towards the fundus is more strongly adherent. The portio vaginalis is most displaced, the uterine body least. Thus in a hæmatoma anteuterinum, a retro positio uteri originates, but not a retro-

version, rather an anteversion; in hæmatoma retro-uterinum an ante-positio, but not anteversion—rather a retroversion. Lastly, in hæmatoma there is no fever and no symptoms of peritonæal irritation are manifest.

The difficulties in the way of a differential diagnosis between retro-uterine hæmatocele and an extra uterine fœtus enclosed in a sac lying in Douglas' cul-de-sac, are very many. It is often simply impossible, from a single examination of a case, to determine which it is, and sometimes the patient must be kept under observation for a week or more before a diagnosis can be arrived at. Shröeder* calls attention to an important point, and it is, that in the extra uterine pregnancy, the uterus is considerably enlarged, which in hæmatocele could only be a complication. In some cases we may be forced to an exploratory puncture to decide the matter. Scanzoni† informs us that in two cases (one occurring in his private practice) he thought that he had before him hæmatocele, whilst the further course of the disease in each instance demonstrated that it was an extra uterine pregnancy.

A retroflexed gravid uterus presents many features in common with hæmatocele. Especially does per vaginal exploration reveal a condition of things simulating hæmatocele closely. By the exercise of bimanual palpation, however, in the retroflexion, we perceive the absence of the fundus uteri from the pelvic brim, and at the same time almost invariably find a greatly distended bladder. In hæmatocele, on the contrary, the fundus uteri is perceived compressed toward the anterior abdominal wall. Small ovarian cysts or uterine fibroids, which are incarcerated in Douglas' cul-de-sac, and have called forth inflammation in their vicinity, may give rise to conditions closely imitating those found in hæmatocele. The previous history will, however, almost certainly prevent error.

The treatment of hæmatocele must have regard to the following indications: 1. To arrest the hemorrhage; 2. To hold within bounds the partial peritonitis, if symptoms of such appear; 3. To facilitate the processes of absorption; 4. To make an opening into the tumor and evacuate its contents under certain contingencies.

*L. c., p. 488.

†L. c., p. 444.

If called to a case at an early period, and there are still signs of a hemorrhage going on, ice should be applied to the abdomen and ergot administered subcutaneously. Rest must be strictly enjoined, and opium exhibited to allay pain. The latter drug is especially necessary to fulfill the second indication. According to our observations, the third indication is best carried out, by the copious use of hot water injections into the vagina several times daily—the use of the hot water to be commenced after the hemorrhage has ceased of course. It is thought, by some authors, that the application of a blister to the hypogastric region is of use in hastening absorption. Whether iodide of potassium, exhibited internally, or locally applied in the vagina dissolved in glycerine, as Scanzoni recommends, is of value, we know not. Constipation must be guarded against by mild laxatives or enemata. Later in the disease iron and quinine must be exhibited. We must take care to sustain the strength of the patient by suitable diet from the very beginning. The fourth indication, to make an artificial opening into the hæmatocele and empty its contents, rarely exists It is fortunate that gynæcologists have gradually attained to a knowledge of this fact, as the opinion that almost every case requires surgical interference, which has prevailed among some authorities, has caused many an unnecessary death. The most favorable termination is in absorption, and the object of our therapeutics must be chiefly directed to promote this end. Nevertheless, the artificial opening and evacuation of the contents of the hæmatocele is necessary when the tumor is so large that the uterus is compressed against the symphysis, the rectum flattened, and it projects above the pelvic brim, and the pressure symptoms are intolerable—and, moreover, when suppuration takes place.

ART. V.—*A Case Illustrating the Value of the Warm Disinfecting Bath for Open Wounds, and the Possibility of Recovery under the most Desperate Condition—Remarks.* By THOMAS J. DUNOTT, M. D., Surgeon to City Hospital, Harrisburg, Pa.

John Welsh, age 23, was admitted into the Harrisburg Hospital *April* 16, 1875; said to have malarial typhoid fever. On stripping him for a bath there was found a necrosed portion of the left tibia, projecting several inches through the integument.

A most disgusting smell was exhaled from its locality, and the history of shivering fits and irregular fever became a history of septicæmia, consequent upon the local lesion. The patient stated that the bone had been protruding for more than a year, during which time he has pursued his occupation as laborer, and that for some time prior to his admission, he had been suffering from rigors, anorexia, diarrhœa, and feelings of general prostration. The protruding sequestrum was slightly movable, the surrounding tissues discolored, swollen, painful and partly gangrenous. The pulse was 94; the temperature 100°F.

April 17th, A. M.—Pulse, 80; temp., 102⅕. P. M.—Pulse, 90; temp., 103.

18th, A. M.—Pulse, 82; temp., 102; respiration, 30; was delirious during the night. The previous day, he had taken in divided doses, quin. sulph. gr. xxx. To have quin. sulph. gr. vj, every six hours. P. M.—Pulse, 81; temp., 104.

19th, A. M.—Pulse, 81; temp., 101.2; quinia continued in gr. v doses, every 4 hours in mixture with tinct. podophyl. P. M. Pulse, 95; temp., 104.

20th, A. M.—Pulse, 80; temp., 103. P. M.—Pulse, 90; temp., 104; resp., 30; hearing dull, countenance stupid, sleeps continually unless aroused; bowels moved once; refuses food except when given by force.

21st, A. M.—Pulse, 82; temp., 102; resp., 28. P. M.—Pulse, 90; temp., 104; resp., 32. From this date, in addition to the usual daily cleansing of the diseased surface and sinuses by syringing with a solution of carbolic acid, 1 to 100, the limb as high as the knee, was immersed in a warm bath of carbolized water, 1 to 400—the temperature being maintained at 99°F. The patient's condition is very unfavorable—the tongue dry, cracked, and covered with dark sordes; has a teasing cough, mucous rales, but no expectoration. The mind wanders, and it is difficult to administer medicine. There is no diarrhœa, no tympanites, and no pain or gurgling in the right iliac fossa.

22d, A. M.—Pulse, 100; temp., 104.5; resp, 24. P. M.—Pulse, 90; temp., 104; resp., 26. Mind wanders constantly; eats nothing but large quantities of milk; refuses whiskey or wine. The sequestrum can be moved easily but movement causes bleeding; to-day he lost about 4 ounces of blood—the bleeding was arrested by elevating the limb at a considerable angle.

23d and 24th, A. M.—Pulse, 100; temp., 101.7 to 100.4; resp., 24. P.M.—Pulse, 100 to 104; temp., 102; resp., 26 to 28.

25th, A. M.—Pulse, 100; temp., 100.3; resp., 28. P. M.—Pulse, 100; temp., 101.5; resp., 22. He protrudes the tongue

with great difficulty, no further than the lips—has jerking of limbs, and universal muscular tremor; swallows with difficulty; is unable to speak intelligibly. He takes tinct. ferri chlorid., 15 drops every 2 hours, quinia and a moderate amount of whiskey (℥ iv) daily, and about a quart of milk. The bath has been continued day and night since the first immersion, the water being kept as nearly as possible at 99°F. To-day, the sloughing surface was syringed with solution of salicylic acid, 1 to 100, every 2 hours instead of carbolic acid solution—the limb being then placed in the bath. To quiet agitation and procure sleep, a hypodermic injection of morph. sulph., gr. $\frac{1}{8}$, and atropia sulph. gr. $\frac{1}{100}$ was given. The limb and chest were then bathed with phosphorated oil. Not being able to retain the quinia, which had gradually been increased to ℥j in 24 hours, he was given ℈j by the rectum, and gr. ij hypodermically every 6 hours.

26th, A. M.—Pulse, 100; temp., 101.5; resp., 22. P. M.—Pulse, 100; temp., 102; resp., 22.

27th, A. M.—Pulse, 92; temp., 100.7. P. M.—Pulse, 120; temp., 102.5; resp., 18. To have quinia gr. ij every 4 hours hypodermically, and the usual dose by rectum every 6 hours. Patient shows signs of being better—mind is rational, has had two enemata of beef tea and whiskey containing the quinia.

28th, A. M.—Pulse, 80; temp., 95; resp., 18. M.—temp., 102. P. M.—Pulse, 110; temp., 104; resp., 28; To have hypodermic of quinia, gr. ij every 3 hours; bowels sometimes reject the enemata. Takes milk and porter freely.

29th, A. M.—Pulse, 100; temp., 100.7; resp., 24. P. M.—Pulse, 100; temp., 102; resp., 24.

30th, A. M.—Pulse, 90; temp., 95; resp., 22. P. M.—Pulse, 100; temp., 103; resp., 32.

May 1, A. M.—Pulse, 80; temp., 98; resp., 20. P. M.—94; temp., 97; resp., 22. Stomach rejects both food and medicine; he sweats profusely and constantly. To have ice pills and hypodermic injection of $\frac{1}{100}$ gr. atropiæ sulph.; also to be sponged with hot vinegar. This controlled the sweating which was so profuse as to keep the bed clothing saturated whenever the atropia and sponging were omitted.

It is my belief that a very small dose of atropia, when combined with the hot vinegar application, will be most effective in controlling this exhausting discharge from the skin. Neither used alone would be successful; but my experience with atropia is limited to doses no larger than the one mentioned, $\frac{1}{100}$ gr.

To-day a quantitative examination of the urine, gave 9.7 grs. per f℥ of urea. Sp. gr. 1029; re-action acid; no albumen;

deposit pale, dense and $\frac{1}{7}$ in bulk. Supernatant fluid, brownish red of Vogel's color scale. Total amount passed in 24 hours, 740 cc. Total urea in 24 hours, 243 grs.

2d, A. M—Pulse, 92; temp., 98; resp., 20. P. M.—Pulse, 88; temp., 97; resp., 18. Retains milk and porter; is cheerful, says he is hungry, and looks much better. Urine total $16\frac{1}{2}$ ℥, sp. gr. 1.030. Deposit $\frac{1}{10}$, mostly phosphates.

3d, A. M.—Pulse, 104; temp., 102; resp., 22. P. M.—Pulse, 96; temp., 101; resp., 20. Urine, total in 24 hours, 800 cc. Sp. gr. 1.029, color not so dark. Urea 124 gr. to f℥. Urea total in 24 hours, 334 grs. Leg was removed from bath, where it has remained since its first immersion; it was swollen; skin of the foot soft and desquamating; the lips of the ulcer everted, pale and bluish. There was not the slightest odor, and the pus was very little in quantity; the limb in size is double that of the other. After removal from bath, the ulcer surface and sinuses were syringed with solution of salicylic acid, and the limb enveloped in cloths, saturated with the usual carbolized solution (1 to 100.)

4th, A. M.—Pulse, 88; temp., 98.6; resp., 20. P. M.—Pulse, 90; temp., 99; resp., 22. Patient is improving; takes solid food, and is in good spirits. The total amount of urine passed in 24 hours, 34 f℥.; color, yellowish red; natural re-action; strongly urinous odor; sp. gr. 1000.25; deposit $\frac{1}{15}$, pale and granular, consisting of urates and phosphates; urea, per f℥, $8\frac{1}{2}$ grs.

8th, A. M.—Pulse, 82; temp., 99; resp., 20. P. M.—Pulse, 104; temp., 102.5; resp., 22. Urine passed in 24 hours, over 41 f℥.

11th Patient has improved so much that he is able to sit in a chair for an hour or two; temperature still high in the evening; sweats profusely when the atropia and sponging are omitted. The flow of urine has increased very largely; has passed as much as 2800 cc in 24 hours. The deposit is white and consists almost entirely of phosphates. How much they are indicative of tissue waste, or to what extent the constant inunction with phosphorated oil has contributed to their excretion, may be interesting questions. The hypodermic injections with quinia solution were in many punctures followed by suppuration.

In order to test the relative value of salicylic and carbolic acids, the ordinary house lotion of carbolic acid was used for many days as an injection and local application to the numerous abscesses without improving their condition. The substitution of salicylic acid lotion was followed by rapid improvement; subsequently, whenever a puncture gave trouble it was soon relieved.

The addition of salicylic acid to the fluid used for hypodermic injection, might prevent the annoying sequelæ of suppurating sores.

20th. Complained of pain in the knee joint, which is hot and swollen. There is not much discharge of pus from the ulcerated surface. The sequestrum is exposed several inches, movable and very irregular in shape. The shaft of the tibia is greatly enlarged near the joint, and there is a puffy swelling which is very painful when pressed upon, just below the patella.

After waiting for some days, expecting to relieve the tenderness about the joint, and not succeeding, it was thought best to remove all the dead bone that could be taken away. The patient was accordingly etherized on the 29th, and the soft parts having been sufficiently divided, the irregularly shaped sequestrum was broken and lifted with lever and chisel, until the upper portion came away; a second piece, tightly wedged in the medullary cavity, was divided with the chain-saw and chisel, and the two halves pulled out from above and below. Esmarch's bandage was applied before the section, and no blood was lost during the operation. The deep opening was thoroughly cleansed with a strong solution of salicylic acid, and the bandage removed. The oozing being very free, the wound was plugged with lint saturated with solution of persulphate of iron, and compression applied. There was no after bleeding.

On the following day the limb was again immersed in a carbolized warm bath, the water being frequently changed until the packing was thoroughly loosened, and could be removed without difficulty. The limb was then removed from the bath, and the opening covered with a linseed poultice saturated with solution of salicylic acid.

On the next day the lint dipped in the same solution was lightly pressed into the opening; the edges of the wound were then brought close together by means of adhesive strips, a wad of oakum placed over the whole and secured with a bandage made from musquito net.

The further progress of the case has been perfectly satisfactory. The patient is now well, has a useful and comparatively sound limb, and, except a depressed ulcer the size of a half dime, the opening is healed.

The case reported, in my opinion, illustrates the great value of the warm disinfecting bath, when compared with the best possible dressing for open wounds; and also the possibility of recovery under the most desperate conditions, provided every

possible resource is used for the benefit of the endangered patient. We ascribe recovery in this instance,

1st. To the use of quinia in heroic doses; 2d. Its employment by hypodermic injection when vomiting and rectal irritability prevented its internal use; 3d. To the employment of atropia sulph. by hypodermic injection, conjointly with sponging with dilute acetic acid, to avoid the profound exhaustion of prolonged sweating; and 4th, the beneficial effects of salicylic acid as a local antizymotic—if I can so express myself.

In several other cases, where life was in jeopardy in consequence of surgical erysipelas, we were successful after using warm baths containing carbolic acid. But the comparison between the two (carbolic and salicylic acid) in efficacy to relieve the purulent conditions, following the punctures made with the hypodermic syringe, convinces me that in salicylic acid, we have a remedy of immense value. Subsequent experience has still more impressed me with the conviction that through its agency the province of conservative surgery will be greatly enlarged.

I have amputated in several instances through badly contused tissues, and with most excellent result, and also have refrained from amputating fingers and toes which formerly would have been sacrificed. At present I have under treatment a patient in whom, from railroad accident, the integument and nail of the third toe was stripped completely from the bones as far as the metatarsal junction; the skin badly contused was replaced, secured with a wire stich, and the foot placed in a warm bath containing salicylic acid. All trouble from dressings, foul sponges, or other source of infection is thus avoided. In this instance the integument sloughed to some extent, but the line of demarcation is rapidly forming, and there is sufficient tissue left to cover the injured toe.

Original Translations.

Gleanings from Foreign Journals. (*Alle. Wiener Med. Zeitung*). By GEORGE HALSTED BOYLAND, M. D., M. A., etc., Baltimore, Md.

Lister's Method.—Prof. Dr. Carl Thiersch, of the Leipzig University, writes as follows upon the substitution of salicylic acid

for carbolic acid: Salicylic acid possesses more powerful antiseptic property, and acts less irritatingly than carbolic acid. The proof of this assertion is found in the author's manifold experiments. The same teach us that the said acid is not adequate to the disinfection of deeply seated ulcers. Cotton is no longer recommended as a vehicle of the acid and an efficacious bandage—but charpie. Furthermore, salicylic acid irrigations are recommended in complicated fractures, as Lister's method of bandaging is not suited to field service on account of the time and trouble requisite; salicylic cotton would be more practicable here at least than charpie.

As an appendix to the above, the experiences are in this place given, which occurred with the acid under discussion at one of the Leipzig surgical divisions. Maggots that had developed themselves in a suppurating wound could not be destroyed with a tolerably concentrated solntion. Likewise, salicylic acid can not be substituted in the place of petroleum as a parasiticide against pediculi pubis.

Danger of Sleeping in Rooms containing Fragrant Flowers and Fruits.—The volatile matières breathed out from flowers and fruits possess in a high degree, on account of the extraordinary fineness of their division, the tendency and power to absorb the oxygen from the surrounding atmosphere, and to give out in its place a corresponding quantity of carbonic acid, thus injuring the salubrity of such air for people living therein, in a twofold manner—first, by diminishing the life-air (oxygen); second, by increasing the fatal carbonic acid. As these facts are sufficiently well known, though too little regarded, they merit being from time to time spoken of and accompanied by warning examples. We here cite several—some with fatal termination. A gentleman was seized with violent headache accompanied at the same time by such a sense of lassitude that it was difficult for him to ward off sleep. Fortunately his eye fell upon some hyacinths arranged along the chimney-piece; he carried them out at once, opened the window, and soon found his condition relieved; however, several days passed by before his head was again entirely clear. Another gentleman conceived the unfortunate idea of building in his room, with branches of oleander, a species of bower wherein to take his rest. The next morning he was found dead in his bed. A lady who had placed in her bed chamber a *jardinière* was found lying in a swoon. A grocer and his servant who had gone to sleep in a room in which stood three boxes of oranges were dead the next day. In a store a clerk acting as overseer of the night-watch used as a pillow a small sack of saffron; he also was found dead the next morning.

Poisoning with Cyanate of Potash.—A photographer, in order to free his hands of certain black silver spots, rubbed them with moist piece of cyanate of potash, a small fragment of which a us slipped under his finger-nail where there was a small wound. th soon experienced decided pain, and almost immediately after, vertigo. To relieve his symptoms, he used, unfortunately, vinegar—by this means the salt was decomposed and prussic acid produced. The vertigo now increased to the utmost limit; fever chills came on, the visage became pale, the eyes deadened, all strength was gone, and speech locked. By chance a dweller in the same house came in, who, finding him in this condition, summoned at once a physician, who succeeded in arousing the patient so far that he could tell him the cause of the attack; nevertheless, he was unable to save him, as the symptoms became worse again, and life ended on the following night.

Case of Hemorrhage in the Pons.—By Dr. Henriet.—A man 68 years of age was found senseless, lying on the floor, and carried to the hospital. On the following morning he still remained in a state of almost complete coma, from which he could only be aroused by powerful excitants. His face was not distorted; he stammered several unconnected words; the tongue which he could put out showed no deviation; there was equally little paralysis of the uvula. The extremities of the right side being elevated fell relaxed; those of the left side showed only some weakness. The left eye could not be closed. The same evening the left extremities also were paralysed and the patient died that night.

Autopsy.—The bridge showed by a sagittal division a hole almost in the centrum and divided into two parts—of which the one in the left half appeared of older date, but to correspond with the first attack; the other was filled with a coagulum about the size of a pea that could easily be isolated, and that hung to a vessel—to the arteria mediana pontis—discovered by Duret. No small aneurysm could be found on the vessel.

Correspondence.

Prof. Manson on Cholera Infantum.

Mr. Editor,—There is no disease among us, whether in our rural sections or in our towns and cities, that is more important or so destructive of the lives of our children as cholera infantum. Its annual prevalence in the eastern portion of this State is not confined to Wilmington and our larger towns, but it also embraces our fields of country practice.

It is because of the great importance and fatality in North Carolina of this destructive malady that the able lecture in your August issue on this interesting subject from Prof. O. F. Manson, M. D., of Richmond, has attracted much attention in the profession of our State. That gentleman is so well and so favorably known, especially to the members of the North Carolina Medical Society (of which he is an honorary member), that his views on *any* subject of medicine command much respect from his medical brethren here. But when he comes forth as a writer on *malaria*, and diseases of a *malarial character*, it is not regarded here that there exists any higher authority. His long and successful experience of twenty years as a practitioner in malarious districts of this State, his acuteness of observation, his fine talents, and professional erudition, united to his protracted study of fevers and diseases malarious in character, justify this statement. He has not only written and published numerous valuable papers on these subjects, but his medical brethren in this State are looking forward with pleasure and interest to a work in book form which they have understood he is preparing on fevers and malarious diseases. For my own part, permit me to say, after an annual conflict as a country practitioner for the last twenty years in these eastern malarious counties with this terrible foe of childhood, that in the main I am prepared to endorse Professor Manson. I have not used quinine so freely in this disease as he does, but it may be that if I had given it more freely my practice would have been more successful.

Many of my medical brethren who practice, as I do, in the country have expressed to me their concurrence principally with the Doctor, since the appearance of said publication, and agree with me that cholera infantum is by no means confined to towns and cities, but is also a country disease, especially in noted malarious places. It is true of this county, and I am convinced it is equally so of all our eastern counties, as it probably is of the whole Atlantic slope of the former slaveholding States, where the desolations of war have filled up to a great extent the ditches and drains of the impoverished farmers. The consequence is that, since the war, malaria has been more abundant in these neglected fields now imperfectly drained. It is my opinion that such localities are not only as a general rule, when the fall seasons are sickly, more visited with malarious fevers and other malarious complications, than they were prior to the late war, when drainage upon Southern farms was so much better than now, but also that these bowel complaints of children, especially cholera infantum, prevails more extensively and severely upon and about such malarious localities during the principal months of these bowel diseases.

It is mainly in relation to the too severe criticisms by some who are still skeptical on the subject of malaria and its numerous complications that have been made upon this suggestive lecture of the distinguished Professor in the Medical College of Virginia that I have written this word of approval, sustained, as I am, by my observation and experience, in the conviction that grievous errors are often committed in withholding quinine in the treatment, during the spring and summer months, of these bowel diseases of children. Opposed as are some of the doctrines and conclusions of this interesting article, the Doctor should remember that boldness of sentiment and innovation of views and practice, as he therein advocates, never fails to excite opposition.

S. S. SATCHWELL, M. D.

Rocky Point, Pender Co., N. C., October 5th, 1875.

Proceedings of Societies.

MOBILE MEDICAL SOCIETY.

Sept. 11.—**Is Puerperal Fever a Specific Disease?**—Dr. Jerome Cochran said this question had recently attracted a great deal of attention. While he could not go into minute historical details, he desired to emphasize the fact that medical opinion in relation to the character of puerperal fever had passed already through two widely different phases, and was now entering upon a third which is nearly identical with the first.

The period of prevalence of the first phase is a very long one, about twenty centuries, extending from Hippocrates to Sydenham. During all this time the febrile affections of puerperal women were described by the ancient fathers of medicine, who regarded them either as the result of inflammation of the womb, or suppression, or putridity of the lochial discharges—that is as symptomatic fevers, more or less closely allied to the fevers following wounds and surgical operations. This opinion was maintained till the first quarter of the 18th century, and it was Strother in 1718 who first made use of the term puerperal fever. The second period commenced about the middle of the 18th century and extends down almost to our own time, a period of about one hundred years. During this time the ancient doctrine that puerperal fever is symptomatic and non-specific yielded gradually to the belief that it is specific, infectious, contagious—in a word, a disease *sui generis* and propagated by a specific poison.

Dr. Cochran attributes this change in sentiment on the part of the profession to a change in the surrounding circumstances of the patient, namely: the establishment of lying-in hospitals. Prior to this, women were delivered at their own houses, or, at any rate, scattered about in private houses, and cases of puerperal fever occurring were of sporadic character, and if there was at any time a multiplication of cases it was never to any great extent, and consequently made no very strong impression. But the institution of maternity hospitals, and the aggregation of large numbers of women in the same building and wards, had the effect of concentrating all the malign influences of the puerperal state, and which soon bore very bitter and fatal fruit. Epidemics of puerperal fever made their appearance in the hospitals and swept off untold numbers of victims.

The first maternity hospital in Europe was established in connection with the Hotel Dieu in Paris; it also possesses the melancholy distinction of being the first in which puerperal fever became epidemic. Peet relates that "a prodigious number of women" died here after their confinement in 1664. After the establishment of lying-in hospitals in most of the principal cities of Euro e epidemics of puerperal fever became common. Churchill records more than 100 as occurring between the years 1746 and 1846.

Dr. Cochran stated that the strong impression made on the medical mind in studying these devastating epidemics, and the plain evidence of the contagiousness of the *materies morbi* had the very natural effect of engendering the belief that a new and specific disease had made its appearance in the world. While this doctrine of the specificity of puerperal fever was the controlling one, as stated, it was never accepted by the profession as definitely proven; and many conflicting theories have come down to us in the literature of those times. Among the more prominent theories are the following: That puerperal fever was a simple uterine and peritoneal inflammation; an inflammation of the omentum; a specific fever caused by a specific poison engendered by crowding puerperal women togcther in hospitals; a pelvic and peritoneal erysipelas; a form of pyæmia and septicæmia caused by the introduction of putrid fluids into the circulation.

The third phase of medical opinion, which Dr. Cochran believes is now gaining ground, is that the types of fever in the puerperal woman may be just as varied as in the non-puerperal, and only differ from the latter in so far as modified by the puerperal state. Their identity with fevers occurring even in men and children (especially that known as surgical fever) is, he believes, more firmly established than ever before. This he has always held to be the true doctrine: hence he maintained the negative of the question under discussion. While the puerperal state may greatly modify the course of any of the exanthematic or other fevers, even to the extent of immensely augmenting the chances of mortality in the patient, it would still be the same specific malady that it is under other circumstances, and *not a specific puerperal fever at all.*

But what are we to do with the suggestion made by Dr. Braxton Hicks in the recent discussion of this subject in the London Obstetrical Society, and partially sustained by Dr. Barnes, to the effect that the poison of scarlet fever in a puerperal woman might produce a puerperal fever which is not scarlatina? Dr. C. thinks that though scarlet fever might occur in the puerperal woman, he could not conceive how its seeds sown in puerperal soils could spring up and bear fruit not of a scarlatinal character. At any rate he was quite sure puerperal fevers are not usually caused in this way.

The true explanation of puerperal fever was thus first essayed when it begun to be regarded as in all essential particulars like surgical fever. In fact, Dr. C. maintains that puerperal fever is surgical fever of the puerperal females. The relation which the several processes of inflammation, pyæmia, septicæmia, erysipelas, &c., sustains to puerperal fever is not more difficult of understanding than their relation to surgical fevers, so called.

Many of the sporadic cases, so called, of puerperal fever are, in Dr. Cochran's opinion, no doubt due to inflammation—para-peri-metritis, or metritis plus peritonitis. But the epidemics that have desolated maternity hospitals and ravaged populous communities are of a very different character. These epidemics are pestilential infections, caused by septic poisoning.

Dr. C. does not believe that all epidemics of septic puerperal fever, so called, are due to the same kind of septic agent, but are naturally divided into puerperal erysipelas and puerperal pyæmia or septicæmia.

Panteau was the first to affirm the erysipelatous nature of the inflammation of the peritoneum and pelvic viscera found in this malady, and subsequently maintained by Hunter and Gordon in more recent time. The

most valuable contribution from recent writers who maintained the above doctrine is that of Dr. Thos. C. Minor, of Cincinnati, 1873, who, in a little book entitled *Erysipelas and Childbed Fever*, maintains a very strong argument to show that in a large number of cases a direct and close connection can be traced between epidemics of erysipelas and puerperal fever. This Dr. C. believes to be true. Dr. C. then went into a short discussion as to what is meant by the term erysipelas. Some of our best modern authorities, including Trousseau and the author of the article *Erysipelas* in *Ziemssen's Cyclopœdia*, maintain truthfully, as Dr. C. believes, that there is no such thing as erysipelas without a pre-existing traumatic lesion, though the wound may be the slightest abrasion. The disease, then, is always due to the introduction in the blood of an infectious, highly contagious principle; and the germs of this poison coming in contact with the organism of the puerperal female, gives origin to a puerperal fever, a pelvic peritoneal erysipelas.

The opinion almost universally maintained in Germany and the north of Europe (and the late discussion in the Obstetrical Society of London, seems to show it to be the most common opinion in Great Britain) is that there is a connection between erysipelas and pyæmia or septicæmia.

Dr. C. considers pyæmia and septicæmia as really one and the same thing; and as the word septicæmia expresses more clearly the pathological processes involved, he uses it to the exclusion of the former—calling this form of puerperal fever puerperal scepticæmia.

The septic and intensely infecting *materies morbi* of septicæmia he believes to be developed in the decomposing blood and lymph exuding from wounded surfaces. The poison once developed here locally, is taken into the systemic circulation, contaminating the whole blood and tissues of the body, and followed by most terrible consequences. Should any of the fluids or tissues of this infected body come in contact with a wounded or abraded surfaces, it takes root and is capable of reproducing all the terrible manifestations present in the first case—just as the leaven of yeast is capable of infinite reproduction and extension. He believes the contagious principle in the diseases now under discussion is of a chemical character, and produces its ravages by virtue of the chemical changes induced in the tissues of the infected organism, and is quite different from the contagious principle of small-pox, typhus fever, cholera, &c., which are propagated by living germs—a *contagium vivum*.

The clinical history of the diseases mentioned, Dr. C. thinks, tend to prove the truth of his assertion as to the existence of these two varieties of infectious diseases. Those infectious diseases due to the presence and multiplication of living germs are distinguished as possessing a distinct period of incubation, followed by a period of continuous febrile reaction, terminating often in a crisis, and followed by a period of convalescence—and, as a rule, such diseases attack the same system but once; while in diseases excited by chemical ferments no period of incubation is ever observed, the resulting disease pursues no regular course, there is no definite limit as to duration, and an attack furnishes no protection against subsequent invasion.

Dr. C. sums up his conclusions as follows:

"1. Puerperal women are liable to all the diseases which may assail women who are not in child-bed.

"2. Puerperal women are liable to simple inflammation; to the specific fevers, such as small-pox, scarlitina, typhus, typhoid, malarial, etc. And although in the puerperal woman these may be modified by the puerperal condition, they still, every one of them, remain true to their special type, and are not transformed into something of an entirely different nature—are not transformed into a specific puerperal fever.

"3. Puerperal women are subject to all the varieties of surgical fever, so called—that is to say, to pyæmia, to septicæmia, and to erysipelas. These affections also in the puerperal woman may be modified by the puerperal

condition, but they remain true to their respective types, and are never transformed into a specific puerperal fever.

"4. There is no such thing as a specific fever which occurs only in puerperal fever *sui generis*.

"5. Leaving out of view the specific contagious fevers, such as small-pox and typus, the term puerperal fever as ordinarily used includes three distinct maladies, namely: (*a*) Simple puerperal inflammation, i. e., puerperal metritis, and puerperal peritonitis of the non-specific type. (*b*) Puerperal septicæmia, including pyæmia, caused by the action of a septic poison which may be generated in the abraded and wounded surfaces and tissues concerned in parturition, or which may be introduced from external sources—a septicæmia, therefore, which is infectious, contagious, communicable, and which may become epidemic. (*c*) Puerperal erysipelas, which is of the same nature as surgical erysipelas, which is, therefore, infectious, communicable, contagious, and, by possibility, epidemic—which can certainly be propagated by a heterogenetic poison, and which possibly may be generated *de novo* in the person of the puerperal patient.

"6. I hold, therefore, that the term puerperal fever, as having no authority, and as tending to confusion and misconception, should be altogether excluded from our medical terminology. In like manner I would get rid of the analagous term, surgical fever, as tending to confusion, and corresponding to no definite malady. In like manner I would also abolish the term pyæmia.

"7. I would designate the various febrile maladies of puerperal and surgical patients according to their real and specific character—that is to say, as inflammation, as septicæmia, as erysipelas, as small-pox, as typhus, etc., prefixing the qualifying term puerperal or surgical according to the exigencies of the occasion."

MEDICAL AND SURGICAL SOCIETY OF BALTIMORE.

(Reported by G. L. Wilkins, M. D).

Sept. 23.—**Infantile Paralysis** was the subject of a paper by Dr. J. J. Caldwell, in which he reported the case of J. S., æt 2½ years, *Jan.* 23, 1875. History: Complete paraplegia with tendency to talipes varus; partial loss of sensation; marked decrease of temperature, and partial atrophy of the affected parts; muscular electro-motor contractility under faradism poor; under galvanism so much better that Dr. C. offered a fair prognosis. The mother stated that during the heat of the previous summer, the child, while teething, was greatly prostrated, when a slight convulsion came on; for several days the child was comatose, but gradually improved when the mother discovered the paraplegia. Ordered to-day warm pediluvia and daily inunctions with ℞. Phosphori Solidi, gr. viij, Olei olivæ calidæ, ℥iv, ℳ. Fit sol. Sig. To be applied to the affected part morning and evening after thorough massage. A large and dampened electrode (positive) was applied to the sacral plexus, while the hand of the operator was applied (as negative electrode) to each of the atonic and atrophied muscles, and galvanic currents were then passed. Repeat on alternate days of from 15 to 30 minutes duration. ℞. Strychinæ sulph. gr. i, Acid phosphoric. dil. ℥i, ℳ. Sig. 5 to 10 drops in sweetened water twice daily. This treatment was continued to *May* 14 (except during the latter month when faradic was alternated with the galvanic current). When last seen, the child could walk around the room from chair to chair, and could stand alone.

Diagnosis of Scirrhus—Dr. J. R. Uhler reported an interesting case, inasmuch as tending to refute the generally accepted idea that cancer can always be diagnosed by its microscopical characters. Man, æt 25, had a hard painful tumor of the left nipple, and closely adherent to the skin. From the family history of the patient, he was enabled to diagnoses scirrhus.

In May last, he removed the tumor, and so far there has been no return. In a mounted section brought before the Society, the usual characters of cancer were absent; a few spindle shaped cells were found, but without nuclei, and there was complete absence of stroma or alveoli.

Harmless Accidents.—Dr. Evans reported the case of a boy, who, while riding on a beer wagon, fell; both wheels passed across his chest. He visited him a few minutes afterwards and found a flickering pulse, slow respiration, and dysphagia. No bones were broken—stimulants were administered and the patient rapidly revived, and with the exception of slight expectoration of blood and occasional cough, he had entirely recovered in 48 hours, without any unpleasant symptoms.

Dr. Reynolds attended a boy, æt 6 years, who was run over by an express wagon, the wheels passing across his abdomen; no other injury was sustained than fracture of the humerous.

Dr. Monmonier suggested that the slight injury in these cases might be attributable to a forcible expansion of the chest at the moment of accident.

Dr. Bates related the case of a man, who, while intoxicated, was run over by a two-horse ice wagon laden with ice; both wheels passing across his chest; in 15 minutes afterwards he was walking down the street. His only explanation of these is in the adage, "that a special Providence seems to preside over children, drunken men, and fools."

Hemorrhoids.—Dr. Bates was called to a gentleman, subject to frequent attacks of piles, that had generally received palliative treatment; their usual course lasted about nine days. Dr. B. decided to try the *postural treatment*, in which position he was kept for ten days, alternating with occasional periods of rest, when the patient was entirely relieved. During the continuance of the position, rather than experiencing uneasiness, he felt great comfort compared with the dragging pain he suffered while in the erect position.

Dr. Evans said, that while attending a case of hemorrhoids, he had occasion to inject a solution of carbolic acid (ʒss to a pint of water), to correct the fetor; it gave immediate relief to the pain; in 24 hours the case was cured.

Dr. Monmonier had frequently used carbolic acid and had found it of great service. It is both sedative and astringent.

[Dr. J. J. Caldwell, read a paper on *Potency and Impotency*, in which he quoted largely from the admirable papers of Prof. Jewell, editor of the *Chicago Journal of Nervous and Mental Diseases* on "The Vaso-Motor Nervous System." Dr. Caldwell also noted his later experience with Damiana, which confirms his observations made in the May number 1875, of the *Virginia Medical Monthly.*]

October 7.—**Incipient Femoral Hernia.**—Dr. Winternitz related the following case: P. B. æt 41, was seized *September* 21, with pain in the abdomen, vomiting; for four days had been obstinately constipated. Calomel, and an enema were administered, but without relief. *September* 22, Dr. Seldner was called in consultation, and made a thorough manual exploration of the rectum, but could not discover any obstruction. The abdomen was examined for strangulated hernia without discovering any abnormal distension. Dr. Monmonier proposed abdominal section, but in deference to the views of Dr Arnold, who was also in consultation, it was not performed. *September* 26.—Compound infus. sennæ produced free alvine evacuations. From this date pulse continued small and frequent, and temperature elevated, and the patient died *October* 1.

Post mortem by Drs. J. N. Monmonier, Seldner, and Winternitz. Slight visceral peritonitis of the small intestines, with adhesion to the parietal peritoneum; ascending and transverse colon distended with flatus; head of the colon and cæcum with the vermiform appendage pushed from its natural position almost to the median line. Coats of large intestines

normal; lower part of the ileum much congested and covered with red and purple streaks. A loop of the ileum about six inches above its termination into the cæcum was constricted in the crural ring by Gimbernat's ligament internally, by the septum of the femoral vein externally, and by Poupart's ligament above. One-fourth of the circumference of the intestine was strangulated in the femoral canal, and had not found its way to the outlet at the saphenous opening; it was glued by adhesion to the entrance and side of the canal, and upon pulling the intestine back into the abdominal cavity, it tore away and broke down. The femoral canal was opened from the thigh, and was found filled with pus, the result of inflammation, and a sphacelus of all the constricted portion. The superficial veins of the thigh were congested; the femoral vein was softened and broken down; uterus and appendages healthy. The case was one of incipient femoral hernia; the knuckle of intestine just entering the femoral canal, and from some cause did not escape from the abdominal cavity—hence no tumor externally.

Diagnosis of Diseases of the Liver, Prof. A. B. Arnold said, even when enlargement of the organ is a prominent symptom seems to be easy, but in actual practice it is not always so. He has known a case of hydatids of the liver punctured by a trocar, when the intention was to tap for ascites, and with fatal results. Quite recently he heard of a death from an aspirator needle wound which had penetrated an indurated liver. Mistakes of this kind are of course rare. Sources of error, however, which ought to be certainly borne in mind in judging of suspected hepatic affections, are dislocation of the liver—a consequence of tight-lacing and pleuritic effusions—and spurious enlargement of the organ. Frerichs in his admirable work depicts an example of extreme displacement of the liver downwards from tight-lacing. The changed position of this large gland has the appearance of an immense tumor occupying the whole hypogastric, and part of the iliac region, The stays worn by women frequently cause an apparent increase in the size of the liver. Pleuritic effusion in the right-side also invariably tends to push the liver beyond the costal arch. Exudation and morbid growths in neighboring structures occasionally cause a similar deviation. On the other hand the existence of hepatic enlargement may escape notice if only the left lobe is involved, or if there be ascites. Under these circumstances, even large carcinomatous nodules situated near the margin of the liver may not be recognized by palpation; more reliance must then be placed on the existence of pain, and other usual concomitant symptoms of gastric cancer. Jaundice is always a symptom of great clinical importance, since it at once directs attention to the state of the liver. However, jaundice is rather an exceptional symptom than the rule in most of the diseases of the liver which cause its enlargement; waxy and fatty liver, for instance, very rarely cause jaundice; the organ may be studded with cancerous growths without producing icterus if the glands in the hepatic fissure are not implicated and do not compress the bile ducts; nor is the enlarged nutmeg liver usually associated with jaundice. In view of some of the uncertainties attending the diagnosis of liver diseases, the recent advances made in pathological histology are adduced as offering a more positive means. The microscopical character of the secretions when revealing the presence of lucine and tyrosine, will at least serve to show changes involving destruction of liver tissue. Leucine appears in the form of homogeneous drops or globules, somewhat resembling fat globules, but to be distinguished from them by being less refractive and by their paler circumference. Tyrosine, generally to be found along with leucine, forms satiny, white or yellowish needles, which either remain isolated, or may unite into beautiful shafts. They are produced when the excretory function of the liver is interfered with, and show an arrest of metamorphosis. All forms of liver disease will produce gastric derangement, wasting, nervous depression, etc.

NASHVILLE MEDICAL SOCIETY.

Oct. 7.—**Election of Officers.**—Drs. Van S. Lindsley, President, Duncan Eve, Vice President, R. D. Winsett, Secretary and Treasurer.

Diphtheria.—Dr. W. F. Glenn had treated several cases in the last few weeks. He thought the disease constitutional, with local manifestations.

Dr. J. B. McConnell had had a great many cases within the past few weeks. He had treated them mostly with iodoform, which he considers the best local application; he also uses tonics and good nourishing diet.

Drs. G. W. Currey and D. Eve would not discard nitrate of silver for any other local application.

Drs. Noel and Freeman thought salicylic acid would act well in removing the bacteria from the mucous membranes.

Dr. A. Blitz thought bromine would be an excellent remedy.

Dr. R. D. Winsett reported a case progressing favorably under treatment by local application every two hours of quiniæ sulph., ℈j, acid muriatic, gtts. xx, glycerine; ℥i; in addition iron and quinine internally, and good nutritious diet.

Dr. Van S. Lindsley, President, delivered his annual address (which will be published in an early issue).

RICHMOND ACADEMY OF MEDICINE.

Sept. 16.—**Obstruction of the Bowels.**—Dr. M. L. James reported the case of a lady, convalescing from quite a serious digestive disorder, with hepatic and bowel trouble, who was attacked with constipation and colic, succeeded by a rather obstinate diarrhœa. The earlier symptoms having resembled those of former attacks of colic, the grave nature of the present trouble was not suspected till the stercoraceous vomiting occurred. Cathartics, mercurial and saline, which had been given to relieve the colicky symptoms, aggravated the distress, and ordinary injections produced no result. Dr. J. then introduced a stomach tube its whole length up the large intestines, and injected through it a half gallon of strong soap suds, with an ordinary plumber's forcing pump. That having failed, he injected through the tube a pint each of castor and sweet oil, and a gill of spirits of turpentine, which gave relief. Drs. R. A. Lewis and G. W. Harris saw the case in consultation.

In answer to inquiries, Dr. J. said where difficulty occurs in passing the tube at the flexure of the large intestine, it may be readily overcome by dilating the gut with some fluid at the point of obstruction: that injections thrown high up in the colon act more efficiently than when administered in the ordinary way. As there is less sensibility higher up, it is practicable to throw up, before expulsive efforts occur, a sufficient amount to thoroughly dilate the colon; and, as he believed, contrary to some of the authorities, to separate and pass with the fluid the ileo-cœcal valve, and reach the point of obstruction. The patient here, an intelligent lady, was conscious of the passing of the point of obstruction, which was very clearly at or above the valve.

Incidentally, Dr. J. remarked that the use of a tube, so that the fluid might be passed high up into the intestine, is generally the proper mode of throwing up nutrient materials, where they are to be given per rectum. He always throws up the amount he desires for food without having the fluids rejected, besides having them more thoroughly prepared for assimilation previous to being absorbed.

Dr. F. B. Watkins thought a word of caution as to the danger of rupturing the intestine by such use of the force-pump should be added.

Dr. R. T. Coleman said that in a short period he had "a shoal" of such cases of obstruction, marked by abdominal pain, constipation, and the de-

velopment of a tumor about the ileo-cœcal valve, varying in size from that of the fist to that of a fœtal head. This tumor, he thinks, is due to cellulitis and fœcal accumulation. His usual treatment is calomel in full doses, leeching and poulticing over the tumor; a little later, he applies a blister over the tumor; and as he believed the trouble is usually related to dyspepsia, he frequently administered Alleghany Springs water and pepsin.

Dr. M. M. Walker had used enema of tobacco decoction and application of poultices successfully in one case.

Dr. O. Fairfax thinks Dr. Coleman's views correct. He has obtained good results by ice poultices over the seat of pain.

Vaginismus.—Dr. F. B. Watkins recently had a case of vaginismus, in a lady, aged 30, married seven months. Assisted by Dr. Wellford, Sims' operation was performed, after failure of other means. In four days thereafter, she was so much relieved as to leave the city, complaining only of the soreness of the incision. There was slight prolapsus uteri, with some retroversion, to relieve which a small pessary was introduced.

Dr. Hunter McGuire's experience would not permit him to believe that this case will prove a complete success; the troub e generally returns. He thinks anteflexio uteri a frequent cause of the trouble, and the cases he has cured have all required permanent straightening of the uterine canal.

Dr. J. B. McCaw said vaginismus is sometimes due to vaginitis, and is then cured by caustics. Sometimes due to uterine trouble—most commonly metritis with anteversion. This form is symptomatic, and is to be relieved in the manner indicated by Dr. McGuire. There is also a class of cases which seem idiopathic, in which Sims' operation seems required. Still another kind of vaginismus, the severest of all—met with in virgins—is due to masturbation. This may be cured by clitoridectomy. He had recently successfully treated two cases thus; in one, the vaginismus had existed two years; in the other, four years; in both so severely that it was almost unendurable to sit down. Other means had been exhausted.

Dr. McGuire thinks masturbation impossible where severe vaginismus exists. He does not think, in Dr. McCaw's cases, that it was clitoridectomy *per se* that cured, but, in addition to the moral treatment, the soreness of the parts consequent upon any operation which did not allow the victims to endure even a touch.

Dr. Watkins sustained Dr. McG's views.

A Case of Vaginal Catarrh in a Child 4 years old, attended by profuse discharge, was mentioned by Dr. James as coming under his charge.

Dr. Watkins remarked such cases of apparent catarrh are sometimes due to the introduction of foreign bodies into the vagina. In other cases simple astringent injections will relieve.

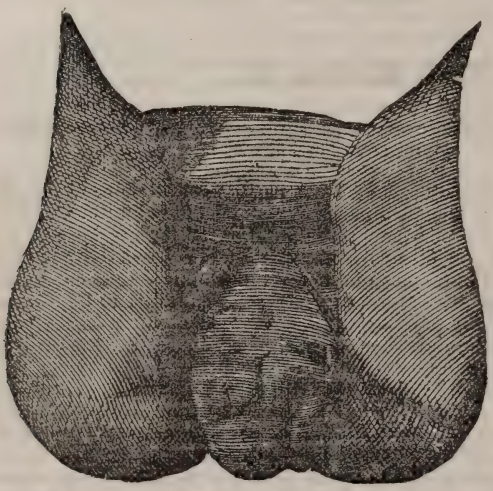
Dr. W. W. Parker recommends especially sulphate of zinc injections.

Dr. R. T. Coleman reminded the Doctor that worms sometimes cause the trouble. In such cases, he uses rectal injections of spts. turpentine or infus. quassia. Vaginitis is not uncommon in uncleanly, scrofulous children. Cohesion of the labia should be guarded against by introduction of pieces of lint.

Analyses, Selections, &c.

Hypertrophy of the Clitoris.—Prof. Wm. T. Howard, Baltimore, in his very excellent report (*Trans. Med. & Chirurg. Faculty Md.*, 1875), says that Prof. Gross states that in Persia, Turkey and Egypt, hypertrophy of the clitoris is often immense, perhaps equalling the size of an adult head. Churchill states (*Diseases of Women*) that a clitoris was amputated at Mercer's Hospital, Dublin, which was about equal in volume to the head of a

child two years old; he also cites a case in which the clitoris was about eight inches long, of a pyriform shape, and of two years' standing. After quoting another case, Prof. Howard remarks that the affection must be extremely rare in this country and Europe, as most of the books do not allude to the subject, or in such a cursory manner as to indicate want of personal acquaintance with it. Hence, the following report of a case in the University Hospital, by Dr. J. L. Hill (and of which a plaster cast was made by Dr. J. S. Conrad) is not without interest:



"Mary P., age 25, strong mulatto woman, weight 145 lbs., height 5 feet 2 inches; entered hospital July 12, 1872, suffering with syphilitic ulcers on the shins; general health apparently good; her skin showed the scars of previous rupia, and several ulcers on both legs of specific character, with a large pedunculated tumor of the clitoris, with lateral attachments to the nymphæ, which seemed to be involved in the growth. The tumor covered the whole vulva, extending as far as the anus, and in length measured 5¾ inches, and in its greatest circumference, 8¾ inches; on its lower part it was interspersed on its surface with nodules about the size of a pea. History: About 9 years ago had a chancre just after her marriage, followed by an eruption on her skin, indicating secondary symptoms; about 2 years afterwards, she noticed the enlargement of the clitoris, to which attention was attracted by its more than natural sensibility. The tumor steadily increased in size from that period, causing no inconvenience or pain to prevent her working, until about 10 months ago, when its sensibility increased so much as to interfere with her walking. She entered the hospital, and was operated upon July 19th, by Prof. Howard; the ecraseur was the instrument used; there was little or no hemorrhage. Carbolic acid dressings were used for two weeks, and followed by simple cerate. Discharged from hospital three weeks after operation, with cicatrix well and healthy, and patient entirely relieved."

This case, like those cited by Drs. Churchill and McClintock, were obviously connected with a syphilitic diathesis; and within a few years past a similar case, in which, however, the clitoris was much less hypertrophied, was reported as having occurred in the practice of Prof. T. G. Thomas. These cases seem to show that syphilis maintains a causative relation to the development of this affection. In his *System of Surgery*, Chelius states that syphilitic affections not unfrequently give rise to considerable enlargement of the clitoris, of which, however, he had seen only an instance. Still, although chancres are not infrequently seen on the clitoris, they appear to have little tendency to induce hypertrophy of the organ, as neither Prof. Bumstead, nor Profs. Van Buren and Keyes, nor Lancereaux make any allusion to it.

Notwithstanding the large amount of erectile tissue entering into the com-

position of the clitoris, and the distension of the cavernous bodies during the venereal orgasm, Parent du Chatelet found, among 6,000 prostitutes in Paris, only three in whom the organ was possessed of a notable excess of size.

As ablation of the clitoris involves its two dorsal arteries, clitoridectomy was formerly attended by profuse hemorrhage; but now that we have the galvano-cautery wire loop, and the ecraseur, it is no longer to be dreaded. In my case the ecraseur was worked very slowly, and scarcely a drachm of blood was lost.

Book Notices, &c.

[We have been compelled by want of space to curtail every notice written for this department.]

Vision—Its Optical Defects, and Adaptation of Spectacles. By C. S. Fenner, M. D., Louisville. Philadelphia: Lindsay & Blakiston, 1875. (For sale by Woodhouse & Parham, Richmond).

It is with great pleasure that we can endorse this work of Dr. Fenner as a most valuable contribution to the ophthalmological literature of the present day. The author states in the preface that he has endeavored to write "in a concise and popular, yet comprehensive form, a *resumé* of our present knowledge of physiological optics, and of the defects of the eye as an optical instrument."

Part 1st treats of light and its physical laws—that is, laws that exist independently of the human eye—which it is necessary to comprehend in order to understand thoroughly the theory of vision, and is written in a style sufficiently comprehensive and clear for the student without being too finely elaborated. Part 2d treats of physiological optics in the same comprehensive style as part 1st. Part 3d treats of the errors of refraction and defects of accommodation in an admirably compact and plain manner, especially the chapters on presbyopia, hypermetropia and myopia—the final chapter or appendix being devoted to instructions for the adaptation of spectacles, which are very interesting and instructive.

We regret we have not the space to give Dr. Fenner's book a more extended notice. The work is cleverly written, and the author deserves the thanks of the profession for the labor and zeal he has bestowed upon it, and in publishing a volume sufficiently comprehensive to give much useful information to physicians who desire to obtain an insight into the department of ophthalmological science, which has been reduced to scientific accuracy by the recent investigations of Donders, Von Graafe and Scheffer. B. B.

A Manual of Minor Surgery and Bandaging. By Christopher Heath, F. R. C. S., Surgeon to University College Hospital, London, etc. Fifth edition. Philadelphia: Lindsay & Blakiston, 1875. 12mo,, pp. 308—xvi. (For sale by Woodhouse & Parham, Richmond).

This edition of this popular manual, familiar to every medical student since the late war, has been revised by the author up to September of the present year, and is a very useful book to every practitioner. It does not claim to be a systematic nor an exhaustive work; hence many of the minor operations familiar to surgeons are not mentioned. But there is this about the work that commends it, viz., that nearly every method for operations recommended is practically good. The facts, moreover, that it has passed through five American editions, and has become the text book in nearly every institution where minor surgery is taught, ought to be sufficient evidence that this manual should be in the hands of practitioners generally.

It is copiously illustrated with wood cuts, and contains several tables for ready reference—such as a table of average weights of the organs of the body—of great importance in post mortem examination—hospital diet tables, selection of formulæ from London Hospitals, etc. It is eminently adapted to surgical emergencies; and that it may be the more useful for this purpose, it has been thoroughly indexed.

Treatise on Therapeutics, comprising Materia Medica and Toxicology. By H. C. Wood, Jr., M. D., Prof. Botany and Clin. Prof. Diseases Nervous System, Med. Dept. Univ. Pa., etc. Philadelphia: J. B. Lippincott & Co., 1876. Pp. 674. (For sale by West, Johnston & Co., Richmond).

This is the second edition, revised and enlarged, of a work that made its appearance scarcely a year ago. The quick demand for a second edition is complimentary to the author, and, indeed, may be regarded as a manifestation of the approval of the enterprise itself.

Dr. Wood's treatise has "especial reference to the application of the physiological action of drugs to clinical medicine;" whereas other systematic works, such as Stillé's, contend "against the mischievous error of seeking to deduce the therapeutic uses of medicines from their physiological action," and classify drugs only after submitting them to clinical test. We see no reason for adopting either exclusive dogma. *Both* methods have their value, and, indeed, are required in determining the uses of many agents. When we remember that medicine has been, and is still, a purely experimental science—dependent solely upon experience and observation for every advance it makes—we see no cause for self-mortification, as Dr. Wood would have us feel, in stating that "the old and tried method in therapeutics *is* that of empiricism."

While there is much to criticise in Dr. Wood's defense of the physiological method of studying therapeutics—such, for instance, as his prejudiced denunciation of experience, the "mother of wisdom;" his discussion of the differences in the susceptibilities of different animals to the action of drugs, etc.—his work, nevertheless, fills a void in therapeutical literature that has long been felt. It should, however, be rather the companion than the substitute of those established works which teach therapeutics from a clinical standpoint. The perfect treatise on therapeutics will be that which will give due prominence to both systems.

A very important recommendation of the work before us is the prominence given to toxicology, so far as it is of interest to the physician.

We cannot undertake, in the limited space at our command, to review any of the articles on special drugs. Each article is as concise as the nature of the undertaking would allow. The work is brought up to a very recent day in every important particular—even jaborandi and salicylic acid receiving fair attention.

The publishers deserve a remark of congratulation for the taste exhibited in their department.

Webster's Dictionary, Unabridged—New Illustrated Edition. Springfield, Mass.: Published by G. & C. Merriam, 1875.

This new edition of this great Dictionary, with four additional pages of *colored* illustrations, is now before the public. It is a work on which the press has positively exhausted the whole vocabulary of commendatory adjectives and complimentary phrases and terms. To the medical profession it is invaluable and indispensable. There is a wealth of learning in its *definitions*. It is, indeed, "a library in itself." We cannot exaggerate its value. We would say more in its praise if we could; but we cannot find words, even in this great work itself, adequately to embody and express our high estimate of this unrivalled literary treasure.

Lectures on Diseases of the Nervous System. By JEROME K. BAUDAY, M. D., Prof. Psychol. Med. and Diseases of the Nervous System, Mo. Med. Col., etc. Philadelphia: J. B. Lippincott & Co., 1876. Pp. 484. (For sale by West, Johnston & Co., Richmond).

This is the best text- and general reference-book published in America on the subjects mentioned. It contains simply a systematic course of forty lectures delivered by the author during the session 1874–5 in the Missouri Medical College. The author makes no pretensions to original investigations as the basis of any of his lectures; but claims to have fully reviewed the latest and best authorities on each subject as it comes up in the course, and he has, in the main, adopted those opinions which seem best sustained by facts.

The work is not exhaustive, nor does it claim to be; but the fundamental principles of neuro-pathology, as at present understood, are clearly and concisely laid down. The volume, therefore, is of great value to the general practitioner—especially as many of our prominent Colleges still persistently refuse to set apart special chairs for instruction in this too much neglected field, thus forcing the young graduate to do much of his special study after he has left College halls.

Poisons in Relation to Medical Jurisprudence and Medicine. By ALFRED SWAINE TAYLOR, M. D., F. R. S., etc. (3d Amer. from 3d revised English edit.) 104 Illustrations. Philadelphia: Henry C. Lea, 1875. Pp. 788. (For sale by West, Johnston & Co., Richmond).

The reputation of the author as the medico-legal expert of the world on subjects of a kind similar to those treated of in this volume will make every practitioner anxious to have this lately-revised edition of this great work. The mere announcement that the work *has been thoroughly revised* and brought up to date, and is presented by the well-known publisher in his usual style of excellence, should be sufficient to lead every one specially interested in medico-legal jurisprudence—as every practising physician should be—to order this last edition at once. A distinctive value of Dr. Taylor's writings is that he does not allow personal or sectional bias on his own part to prevent him from giving due credit to other than English authorities. Hence frequent references to American publications are found throughout this volume.

The Physician's Visiting List for 1876 *of Messrs. Lindsay & Blakiston*, Philadelphia, is now ready and for sale by Messrs. Woodhouse & Parham. During the twenty-five years of the annual publication of this very useful Physician's Visiting List, it has been growing continually in favor. It contains an almanac for 1876, Hall's ready method in asphyxia, poisons and antidotes, table for calculating period of utero-gestation, blank leaves for visiting list for 25 patients weekly, for monthly memoranda, for addresses of patients and nurses, &c., accounts rendered, wants, obstetric and vaccination engagements, records of births and deaths, general memoranda, etc.

Lectures on Syphilis and on some Forms of Local Disease affecting principally the Organs of Generation. By HENRY LEE, Prof. Surgery Royal Col. Surg. England, etc. Philadelphia, Henry C. Lea, 1875. Pp. 246. (For sale by West, Johnston & Co., Richmond.)

The long established reputation of this eminent surgeon as an author on venereal diseases, and the easy style of his writings make anything from his pen on the subjects indicated by the title of this book, eagerly sought after and read. The present work consists principally of a collection and revision of the author's numerous papers and lectures on venereal diseases, which have been published in various medical journals, through which channels his views have already become familiar to the medical world. It will be remembered that he is a dualist, and is an earnest advocate of the

mercurial plan of treatment of syphilis—the treatment being carried out preferably by means of calomel vapor baths. Indeed were demonstrative facts asked to establish the value of mercury in syphilis, they would not be called for a second time after perusal of the fourth chapter, (*Treatment of Syphilis*.

The other portion of the work is alike interesting, instructive, and authoritative. Lectures viii, ix and x are devoted to urethral and prostatic discharges, local affections, &c. We are compelled to abbreviate our notice; but we cannot lay our pen aside without commending this book to physicians who propose to practise on venereal deseases—whether or not they already have the moresys tematic works of Van Buren and Keyes or of Bumstead, of our own country.

A Treatise on Acology and Therapeutics with some of the most Prominent Principles and Rules of Chemical and Medical Pharmacy. By J. G. WESTMORELAND, M. D., Prof. Mat. Med. and Therapeutics, Atlanta Med. College. Alanta, Ga. Plantation Publishing Co., 1873. Pp. 391.

We do not appreciate the necessity which the author recognized for substituting in the title the word *Acology* for *Materia Medica*, since custom has established a definition of the latter term which every medical man can give. But we venture to affirm that at least two-thirds of the practising physicians of almost any community are ignorant of the meaning of the word adopted by the author. To say the least, it was a very impolitic selection, if the author wished to obtain sale for his work.

One of the advantages claimed by the author for his treatise is his classification of remedies, which is on the physiological basis. We have expressed our opinion regarding such a classification, as fully as space will permit, while noticing Professor Wood's work. Professor Westmoreland, however, himself presents another objection to the adaption at present of the exclusively physiological classification. He says: "It will be found that in some of the classes only a few articles are mentioned. This is owing to the fact that many remedies used in the treatment of disease have been given rather empirically, with the expectation of certain therapeutic results, without, however, any knowledge of, or regard for, the immediate action had by them." This is undoubtedly one of the "MISCHIEVOUS *errors*" of the system referred to by Dr. Stillé. How unfortunate some of the refinements of modern science which prohibit us from using agents, however valuable they may be in disease, because we do not understand their physiological action! Prof. Wood treats us better. He says: "Unfortunately, *in the great majority of cases* [italics ours] our knowledge is not complete enough for this [physiological classification]; and the clinical method has to be used to supplement the scientific plan." To Profs. Westmoreland and Wood we would say, give us a little more of the *supplement* so as to supply *present* wants.

With the exceptions mentioned, the work of Prof. Westmoreland is a very excellent manual. It contains a concise statement of the therapeutic properties of nearly 1000 different agents: and it is of additional value in that it treats of many of the indigenous medicinal plants, &c.

Editorial.

The Late Meetings in this City of the *Association of Medical Officers of the Confederate States Army and Navy* and of the *Medical Society of Virginia* were of peculiar interest and profit. We regret that no space is left us in which to make some incidental remarks suggested by the occasions.

In reference to the State Society, the pleasure and interest of the session was materially increased by the attendance of, and participation in the proceedings by the visiting members, among whom were Drs. J. Marion Sims, of New York; S. S. Satchwell and R. J. Hicks, N. C.; F. T. Walker, Ga.; E. A. Semple, Ala.; and A. A. Moore, S. C. By order of the Society, the Transactions of the session appear in connection with this issue of the *Monthly*, to which we must be content for the present to refer our readers.

The Executive Committee of the *Association of Medical Officers of the Confederate States Army and Navy* have contracted for the publication of its late Transactions in connection with the December issue of this journal, and a copy will be sent to every member whose name is entered on the register. Dr. Hunter McGuire, Richmond, was elected President, Dr. John M. Rayne, Richmond, Secretary, and Dr. W. W. Parker, Richmond, Treasurer. It is proper to say that it was thought best by the members from other States than Virginia to select permanently the last two officers from this city. The late President of the Association, Surgeon General S. P. Moore was elected an honorary member.

The last paragraph of Dr. McGuire's article in this number' page 547, beginning "We are indebted," &c., was written as an editorial note.

We regret that the great pressure upon our columns has compelled the use of so much small type in this issue. No one can condemn the use of small type more than we; but with the explanation made we hope our subscribers will bear with us.

The same necessity which compelled the use of small type also compels us to lay over until subsequent issues many accepted contributions.

Several books, &c., have been received which will receive attention in their proper order. We are also forced to intermit the usual monthly mortuary reports.

The West Virginia Medical Student, for November, has made its appearance. It is, as we expected, *excellent*. See advertisement of it, and sustain it.

Obituary Record.

At a called meeting of the *Mobile Medical Society*, held at the hall September 23. 1875. Dr. F. A. Ross, President, in the chair, for the purpose of expressing the feeling of the members in regard to the death of the late Dr. J. T. Gilmore, the undersigned, appointed a committee to draft resolutions, respectfully submit the following:

Whereas. It has pleased the Almighty in his inscrutable wisdom, to remove from his sphere of usefulness on earth, our late Fellow and former President, Dr. John Taylor Gilmore. Therefore be it

Resolved. That while we bow in submission to his will, we feel that in the death of our late associate, we have sustained a loss that it will be hard to fill: for while we will confess that there are many able surgeons, there are few who had such a rare combination of gifts—quickness of apprehension, soundness of judgment and boldness of execution.

Resolved. That as a surgeon in the late Confederate army, his name will be ever revered by those who served under the Southern banner.

Resolved That for his readiness to aid his brother practitioner by night or by day with his counsel or his skill, we hold him in grateful remembrance.

Resolved, That we think it proper to put on record that he never refused surgical assistance to any one, however poor he or she might be.

Resolved, That we tender to his bereaved family our most sincere and heartfelt sympathy in their sorrow.

Resolved. That a copy of these resolutions be sent to his family.

Resolved. That a copy of these proceedings be sent to the city papers and to the *New Orleans Medical and Surgical Journal*, and *Virginia Medical Monthly*, for publication.

E. P. Gaines, M. D.,
W. T. Webb, M. D.,
W. H. Anderson, M. D.,

At a called meeting of the Richmond Academy of Medicine, held Oct. 30th. 1875. for the purpose of giving expression to their regret at the death of the late Dr. Peterfield Trent, the following committee was appointed to draft suitable resolutions: Drs. Watkins, Nalle, Brock, Cunningham and Taliaferro.

The committee retired and soon returned with the following preamble and resolutions, which were unanimously adopted:

Whereas, God in His wisdom has removed by death one of our highly esteemed members, Dr. Peterfield Trent, it becomes us to give expression to our feelings in regard to the loss of one so long known in our midst. Therefore, be it

1. *Resolved*, That in this bereavement we recognize the hand of Him with whom are the issues of life and death, and bow with reverence and resignation to his will.

2. That the Academy of Medicine has lost one of its most generous and high-minded Fellows, and our community one of its brightest ornaments, whose exemplary life affords a standard worthy of our imitation.

3. That while we mourn that we shall see him no more, we will cherish with fond remembrance and interest the many virtues exemplified in his life.

4. That his bereaved family have our deep sympathy at the loss of a most devoted husband and tender father, and that we will attend his funeral in a body and accompany his remains to their final resting place.

5. That the Secretary of the Academy be instructed to forward a copy of these resolutions to the family of the deceased, and publish them in the *Va. Medical Monthly.*

VIRGINIA
MEDICAL MONTHLY.

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Original Communications.

ART. I.—*A Review of Progress in Therapeutics during* 1874—Being a Report read before the New York Medical Library and Journal Association, October, 1875.* By MARY PUTNAM JACOBI, M. D., New York City.

Mr. President.—This report of the year 1874 should have been presented last spring, but, owing to some misunderstanding, has been deferred until now. It can hardly be considered a report on the "Progress of Therapeutics," inasmuch as the knowledge upon which this art is based cannot be said to have taken any such decisive steps as may be seen to mark progress. Instead of discoveries, or of changes in method destined to radically modify therapeutics, we are called upon only to record and summarize a certain mass of experiments—made in the laboratory or by the bedside—upon various details that have nearly all been brought more or less distinctly into notice before.

The substances that affect the nervous system, either as stimulants or sedatives, are those which, during the last year, as well as for some time previous, have absorbed most attention and have been the subject of the most numerous experiments.

The last lectures of Claude Bernard, of the College of France, are devoted to *anæsthetics, and principally to chloroform, ether, and opium.* The researches upon opium add little to the results of Bernard's former well-known experiments upon its different alkaloids. But the lectures upon chloroform and ether contain

*Beside the explanation made in the first paragraph of this "Report," no apology is necessary for its presentation *in extenso*, even at this late day, when *some* of the advances herein noted have already been publised; for certainly no one in America is more competent than the authoress to make such a report. Our only regret is that the size of the *Monthly* does not permit of the publication of the entire article in one number. The portion of the Report here presented considers principally *Chloroform, Chloral, Bromide of Potassium, Bromide of Camphor, Croton Chloral, Nitrite of Amyl, Morphine, Gelseminum, Phosphorus* and *Alcohol.*

much matter that is either new, or else the more precise verification of what had been stated more vaguely before.

The first experiments test the relative value of different methods of absorption, of which three are employed: inhalation, immersion, subcutaneous injection. The two latter methods are applicable only to frogs, salamanders, fish,—animals possessing aquatic respiration. In warm-blooded animals, on the contrary, subcutaneous injection of chloroform produces no anæsthesia. If the chloroform be pure, the local irritation produced by it will effectually prevent absorption. Diluted, it may, however, be absorbed, but only into the veins; and according to Bernard, no substance can act upon the organism until it has entered the arterial blood. But so volatile a substance as chloroform evaporates from the lungs before it can reach the left ventricle on its passage from the venous to the arterial system. In cold-blooded animals, where the respiration is much less active, the pulmonary exhalation is insufficient to dissipate all the chloroform during the passage of the blood through the lungs. Enough, therefore, passes to the arterial system to produce a notable effect upon the sensitive elements of the central nervous organs, which, according to Bernard, are the unique seat of anæsthesia.

This doctrine, as the author himself observes, has indeed often been advanced before; but he attempts to establish it by more decisive experiments. In the first place, the passage of chloroform into the blood is demonstrated by distilling the blood of anæsthetized animals, exposing the expelled vapors to the action of red heat, and then testing with nitrate of silver. The vapors of chloroform are decomposed by red heat into water and muriatic acid, and the latter gives the characteristic precipitate of chloride of silver. It may thus be shown that chloroform is in the blood during the whole period of anæsthesia, and also that anæsthesia does not begin until the blood contains a certain quantity of the anæsthetic, and ceases before this is entirely eliminated, but when it has become insufficient. Chloroform does not, therefore, act merely by producing an impression on the extremities of nerves. Its effects are generalized by the circulation, when this is free; but limited to any portion of the body containing a segment of the central nervous organs when the circulation has been interrupted before the point of absorption of the anæsthetic.

To show this, two frogs are plunged into vases, each containing a half per cent. solution of chloroform, and covered by a rubber membrane pierced in the centre by a hole. Through this the frog may be passed as far as the middle of his body, and there held in place by the retraction of the membrane. In the one case the upper, in the other the lower, half of the body of the frog is plunged into the solution of chloroform; but in both cases, after a few minutes the entire body is anæsthetized. If, however, the aorta be tied, or all the soft parts underneath the lumbar nerves, so that the circulation is arrested in the posterior half of the body, the effect is different. If the anterior half of the body be immersed in the chloroform, the entire body is anæsthetized; but if the posterior half be immersed, the anæsthesia is limited to the surface in immediate contact with the solution. In the first case, the anæsthesia of the anterior segment of the spinal cord is extended to the sensitive nerves that emerge from the posterior segment continuous with it; but in the second case, the anæsthetic influence exerted upon the peripheric extremities of the nerves was unable to travel back towards the spinal cord, and, in the absence of the circulation, could not be generalized. In a third experiment, the circulation was left intact, but the spinal cord was cut across just behind the anterior extremities. In this case immersion in chloroform gave precisely the same result as was obtained in the first experiment. That is to say, whether the anterior or posterior half of the body was brought in contact with the anæsthetic, general anæsthesia was produced.

These experiments prove—1st. That chloroform acts characteristically when carried by the blood to the nerve centres, but not when brought in contact with the periphery of sensitive nerves; 2nd. That any segment of the spinal cord, though completely isolated from the brain, may be affected by chloroform, provided the blood has free access to it.

In the brain, as shown by trepanning dogs while under the influence of chloroform, the initial, asphyxic symptoms are accompanied by hyperæmia; but so soon as full anæsthesia has been induced, the brain is anæmiated. This condition of the cerebral circulation, however, is insufficient to account for the phenomena of anæsthesia. The diminution of blood does not

exceed that observed in a simple state of repose, during which the sensitive system will still react to external stimuli—as is not the case during anæsthesia. In anæmia or repose of the nerve centres, the motor functions are diminished equally with the sensitive, while in anæsthesia, although voluntary movements cease, the motor nerves retain their excitability and respond as usual to an electric current.

The effect of chloroform depends on an immediate influence exerted upon the sensitive elements of the nerve centres, in virtue of which their properties are temporarily suppressed; in other words, they temporarily die. But death can only be produced by the suppression of one or the other of the two factors necessary to life, namely: the organism, or the medium in which it lives. Suppression of the organism or nerve element would result in permanent death. The transitory death of anæsthesia must, therefore, depend on a vitiation of the medium or blood, by chloroform, ether, heat, asphyxia, or any other agent capable of altering its properties as nutriment of the nerve cell.

In chloroform anæsthesia, as in natural death, the influence exerted at the central extremity of the sensitive nerve is first made manifest at the periphery. The intimate phenomenon of this transitory death of the nerve cell is believed by Bernard to be a semi-coagulation of its substance, analogous to that which chloroform has been shown to determine in muscular fibre, and even in vegetable tissues. If this condition be somewhat exaggerated, the nerve elements are unable to regain their normal condition, and death of the entire organism results, without the intervention of any new specifically toxic action of the drug.

The study of the phenomena of anæsthesia is well known to be most instructive in regard to the physiology of the nervous system. Thus Bernard remarks that when true anæsthesia exists in the posterior limbs of a frog it is impossible to excite in them reflex movements, because the centre of these movements, situated in the posterior segment of the spinal cord, has suspended its functions. At the same time, however, a voluntary impulse, starting from the brain, is able to excite movements in these posterior limbs. The brain, therefore, is *the* grand sensitive nervous centre, and as such reacts upon the spinal cord in the same manner as does the cord upon the sensitive nerves. In

anæsthesia by inhalation, the brain is first affected, then the spinal cord, lastly the medulla, and consequently the respiration and the heart. Classed according to the functions instead of the organs affected, anæsthesia progresses in the following manner: first abolished is self-consciousness; then sensibility to external impressions—first of the special senses, then of the general sense of touch; then the internal sensibility, presiding over unconscious reflex acts, as of deglutition; finally, reflex actions entirely automatic and essential to life, respiration and circulation. Chloroform, therefore, seems to divide sensitive nerves into several distinct categories. In each spinal nerve the recurrent sensibility is the first to disappear.

Professor Schiff, at Florence, has also been investigating the action of chloroform and ether, and especially their toxic effects. Both anæsthetics paralyze the respiration, the blood vessels, the heart, and the motor nerves; but with ether the paralysis occurs in the order just enumerated, while with chloroform the order of succession is variable. Thus, after ether, life may be maintained so long as respiration persists, or even as long as artificial respiration can be kept up. But chloroform, on the contrary, may, in spite of satisfactory respiration, cause death by paralysis of the heart, as a consequence of paralyzed blood vessels, which no longer return blood to the heart. The pressure in the blood vessels may go down to zero, yet, in the experiments, the heart would beat if the large vessels were compressed. (*Practitioner*, April; *Am. Jour. etc.*, July, 1874.)

As a contribution to the therapeutic uses of chloroform, Liegard relates (*Gaz. des Hop.*, 747) a case of tetanus observed in London successfully treated by chloroform inhalations. The tetanus was caused by a compound fracture of both bones of the forearm, in a boy of 15. The patient was kept under the influence of chloroform day and night for three weeks, the anæsthesia being only interrupted twice daily for the administration of soup. Six ounces were consumed a day, or 126 ounces altogether. Although related in 1875, this case is said to have been observed in 1862.

As long ago as 1864 Bernard discovered accidentally the valuable form of anæsthesia that could be produced by *combining the effects of chloroform with those of morphine.* The very

same week the discovery in the laboratory was confirmed by a clinical observation of Nussbaum; and to-day this combination is frequently utilized in practice. In his new lectures, Bernard discusses the theory of the combined action of these two powerful agents. It is known that after a small dose of morphine (1-2 centigrammes) by subcutaneous injection, the inhalation of a very small amount of chloroform suffices to determine anæsthesia. Conversely, an injection of morphine at the moment that the effects of chloroform are about to pass away will renew anæsthesia, much more profound and prolonged than would be caused by a single fresh inhalation of chloroform. In the first case, the morphine has begun to destroy the physiological properties of the nerve element, thus rendering them more excitable, as are all elements when beginning to die. In this state they are susceptible to a far less degree of vitiation of the blood by chloroform than when in a normal condition, and hence succumb much more rapidly to its influence. In the second case, as the anæsthesia is beginning to disappear there yet remains some chloroform in the blood, and this amount, insufficient to suspend the properties of sensitive elements in a normal condition, becomes sufficient when they are submitted to the action of morphine. Hence, two agents acting upon the same elements, but in a way which, if not antagonistic, is at least entirely different, may so combine their effects as to produce a result similar to what would have been obtained by a more powerful and dangerous dose of one of them alone.

The local insensibility that may be determined by chloroform, and which Bernard refuses to consider as true anæsthesia, has been utilized by means of deep injections along the trigeminus nerve, in cases of tic douloureux. Bartholow (*Braithwaite*, vol. 1870) reports four cures out of fives cases. The injections were followed by great pain, then numbness, puffy swelling, induration, finally permanent relief. So Chouppe (*Gaz. Med.*, No. 35, 1874) finds, as the result of a thousand experiments upon himself, that the subcutaneous injections of morphine at the seat of pain produces its anæsthetic effect from two to two and a half minutes sooner than when it is made elsewhere. A further proof of the local action of morphine is alleged from the use of concentrated solutions. While a weak solution, 1 part in 150, produced severe

pain at the point of injection, a solution of 1 part in 50, or 1 in 40, was quite painless.

The theory upon which Liebreich introduced *chloral* into therapeutics, as is well known, was based upon the supposed decomposition of chloral in the blood into formic acid and chloroform. Bernard denies the truth of this theory. He observes that the reactions obtained by Personne with the blood of chloralized animals are as attributable to the chloral itself as to chloroform. The breath of these animals never emits the odor of chloroform, but, on the contrary, the melon odor characteristic of chloral.

The sleep produced by chloral is analagous to that caused by morphine, though more calm; and the anæsthesia differs from that of chloroform in that there is no real insensibility; for even while asleep from chloral, a dog will groan a little, if pinched or irritated by electricity. In rabbits, however, as I could affirm, if necessary, by personal experiments, all appearance of sensibility is lost as completely after a subcutaneous injection of chloral as after a chloroform inhalation.

Bernard attributes the action of chloral to a direct physico-chemical effect upon nerve cells—similar, he remarks, to that of all toxic actions—and in this case, as in that of other anæsthetics, probably a semi-coagulation. This is much the more probable, since chloral has been shown to form definite combinations with albuminous substances. It is in virtue of such combinations that chloral becomes an excellent antiseptic, as was first shown by Dujardin-Beaumets and Hirne in 1873, and confirmed by Personne in a communication made to the Academy of Sciences in 1874.

This coagulating property, however, constitutes a serious objection to the most extraordinary therapeutical experiment of last year, namely, the injection of chloral into human veins, either for the cure of tetanus or for the induction of anæsthesia. It is to Oré, of Bordeaux, that the world is indebted for this bold suggestion, which, in his hands, claims a success that no one else has confirmed. Oré has reported in all 16 successful cases of intra-venous injections—several for the cure of traumatic tetanus. Of the latter, the following is an example (*Centralblatt*, 16 May, 1874): A man, 52 years of age, received an in-

jection of 1 gramme of chloral, dissolved in 10 grammes of water. This was followed by 11 hours of deep sleep, with absolute anæsthesia of the skin. This latter circumstance decidedly contradicts Bernard's statements that have been just quoted. There was no return of the tetanic symptoms, but the injection was repeated on two successive days. A complete cure was effected without causing even a phlebitis of the vein operated upon. On the other hand, Launelongue, of Bordeaux, reports (*Gaz. des Höp.*, 1874, p. 994) a minutely-detailed case in which, although all the directions given by Oré were most scrupulously observed, the disease proceeded to a fatal issue. The tetanus declared itself 7 days after a wound of the axilla; in 16 hours, trismus and opisthotonos were both markedly developed. The first injection was made in 24 hours from the invasion of the disease. A solution containing $\frac{1}{6}$th part of chloral was used, and 25 centigrammes were injected a minute. In 27 minutes, 7 grammes and 50 centigrammes had been thrown into the vein, and the patient fell into a profound sleep, with complete resolution of the tetanized muscles; but in 12 hours both trismus and opisthotonos returned. At this time, the radial vein (the seat of injection) presented a clot 15–20 centimetres long. A second injection of 1 to 2 grammes was made into the cellular tissue around the left saphenous vein, and 4 minutes later, 3 grms. 50 centgrms. into the right saphena. Again resolution was obtained, but tetanic symptoms returned in 6 hours. Into the left saphenous vein 4 grms. 50 centgrms. were injected, determining complete resolution, with a fall of the pulse from 168 to 132, and of the temperature from 41° (centigrade) to $40\frac{2}{5}°$. Four hours later, respiration became more and more noisy; râles were heard in the chest; pulse became irregular and incoherent, and death ensued in 5 hours after the third injection, and 55 after the attack, without asphyxia or convulsions, but in consequence of the increased embarrassment in the circulation and respiration. At the autopsy, clots were found in all the veins that had been injected, while the veins themselves were inflamed. Many soft clots existed in other veins, and a tenacious coagulum in the right ventricle, stretching into the pulmonary artery and both of its principal branches. Launelongue argues from these lesions that, although the patient would probably have succumbed to the

tetanus without the chloral, he was equally likely to succumb to the chloral without the tetanus. He promises himself, therefore, never to repeat the experiment.

Another case is reported by Tillaux (*Gaz. des Höp.*, 1874). After the first injection the resolution was so complete that great hopes of cure were entertained, and the case was even related at a session of the Societé de Chirurgie. But the symptoms returned in 24 hours, and 3 new injections, though determining remissions of constantly diminishing duration, were yet finally unable to avert death. The autopsy presented lesions similar to those of Launelongue's case.

After these failures of the so-called heroic method of administering chloral in tetanus, it is singular to read Verneuil's report (*loc cit.*) of 5 cases of tetanus cured by ingestion of chloral in potions of ʒj. In the first case there was no wound—only extreme stiffness in the limbs after a violent effort, followed in a few days by trismus. The second case was a scalp wound, almost cicatrized, when tetanus occurred on the tenth day. The other three were all cases of slow march.

Verneuil believes that there are two kinds of tetanus suited to chloral treatment—the first of which often subsides spontaneously, or under the influence of heat; the second, of long duration, and still possible to cure. But the third and intensely acute form is always fatal in from 2 to 7 days. It results from extensive wounds, and is always complicated by septicæmia. For this, chloral is as useless as all other treatments hitherto known. In view of the dangers of intra-venous injection, Verneuil would reserve it for cases in which the injestion of 10 grammes had failed. He observes that, although his five cases cured by chloral were certainly specimens of the milder forms of the disease, nevertheless they are the first successes that have occurred in his experience.

In the *Jahrbuch für kinderheilkunde* (VII. Jahrg. 1 Heft.), chloral is reported to have been favorably employed in the treatment of trismus neonatorum. Here again two distinct species must be distinguished—cases with fever, which implies septicæmia, of which the tetanus is only a symptom, and an apyretic form, in which the convulsions are reflex spasms, provoked by a peripheric excitation. In the latter form, and in that alone,

chloral is beneficial, and preferable to opium because without tendency to produce cerebral congestion.

In strychnia poisoning, chloral has been found more successful than in spontaneous tetanus. In a case quoted in the *Revue Therapeutique*, June 15th, paroxysms of opisthotonos were occurring every 30 or 40 seconds. After administration of 1 grm. 80 centigrammes of chloral, the paroxysms ceased, but returned in 30 minutes. After a second dose, a new pause of 50 minutes; after a third, only one slight access occurred in the course of 3 hours; and after a fourth, the patient fell asleep and awoke cured.

In the report of the Edinburgh committee appointed to investigate the antagonism of various poisons with one another, the mutual action of strychnia and chloral was carefully tested. (*Brit. Med. Journal*, vol. 2, p. 436, 1874. The average fatal dose of chloral was shown to be for a rabbit, 21 grains to every 3 lbs. of its weight; for strychnia, $\frac{1}{96}$th of a grain. This ascertained, it was found that the simultaneous injection of $\frac{1}{96}$th grain of strychnine and 15 grains of chloral was followed by recovery; or in other words, a non-fatal dose of chloral, if given at the same time as a fatal dose of strychnine, was able to avert death. If the administration of chloral followed that of strychnine in from 2 to 8 minutes, it was equally successful as an antidote; but was useless if given later than 10 minutes from the time of poisoning. A fatal dose of chloral, however, was little modified by strychnine. The committee consider these facts of immense importance for the treatment of strychnine poisoning, tetanus, and other spasmodic diseases.

Experiments on animals have placed in a strong light the nature of the risks attending the intra-venous injection of chloral. Feltz and Ritter (*Amer. Jour. etc.*, Oct., 1874) find that the operation is fatal at an average dose of 25 centigrammes per kilogramme of the weight of the animal. Anæsthesia is rapidly induced, and maintained by constantly diminishing doses of the chloral until 4 or 5 hours before death, when it becomes permanent without renewal of the dose. Temperature falls from 1 to 6 degrees during the first 6 hours, then rises. This fall of temperature seems to depend upon the alteration of blood corpuscles which are fouud to be completely deformed, with loss of elasticity, while crystals of hæmato-globine form in the field of the

microscope. The capacity of the blood for oxygen is diminished from 250 cc. per 1000 to 175 cc. This alteration of the blood, perhaps itself caused by combination of the chloral with the albumen of the blood corpuscles, is evidently the cause of the intense congestions of lungs, liver, and kidneys, and of the occasional hematuria signalized by Vulpian. Feltz and Ritter agree with Claude Bernard in the assurance that chloral is exhaled unchanged, and does not suffer decomposition into chloroform. According to these experimenters, chloral in a fatal dose acts by paralyzing the respiratory centres. The experiments of Colin, reported to the Société de Chirurgie, show that intra-venous injections of chloral, unless made with extreme slowness, are liable to cause sudden death by syncope. When the chloral enters the cavities of the heart, a single drop arrests the heart of a frog. On this account it is necessary to make the injections as far from the heart as possible. At the same time the neighborhood of joints must be avoided, as otherwise an arthritis is liable to be excited.

When after the dangers resulting from coagulation of the blood, and consequent thrombi; of destruction of blood corpuscles, with visceral congestions and dangerous fall of temperature; finally of syncope from the direct effect upon the heart;—when is added to all this the certainty of at least adhesive phlebitis at the point of injection, and the necessity of opening several veins should the treatment be prolonged, it would seem self-evident that so hazardous an operation should be reserved for an emergency as desperate as that of tetanus, and scarcely credible that it should be proposed as a substitute for inhalation of chloroform in surgical operations. Yet this has been done Oré injected 11 grammes of chloral dissolved in 22 grammes of water, to induce anæsthesia during an operation for necrosis of the calcaneum. Another case was reported to the Société de Chirurgie, where the same method was employed during an operation for cancer of the rectum. In neither case did any accidents ensue. But in the discussion at the Society the innovation was indignantly repudiated as being equally dangerous and superfluous.

While Oré and others have been endeavoring to overcome the obstacle afforded by coagulation of the blood to the intra-venous administration of chloral, Porta (*Revue Therap.*, Mar. 14, 1874)

has utilized this same property for the treatment of varicose veins. One gramme, $\frac{1}{2}$ or $\frac{1}{3}$ was used at a dose, introduced by a hypodermic syringe, and determined instantaneous coagulation; In a few days the vein atrophied. The method was successfully applied in 16 cases; accidents were rare, and, when encountered, unimportant. Three kinds were observed—a slight phlebitis, small abscess, finally a circumscribed gangrene. With the cure of the varices, ulcers dependent on them were healed.

The last important application that has been made of chloral is in the treatment of cholera. Higginsun has given it especially at the beginning of collapse. (*Brit. Med. Jour.*, vol. I., p. 254, 1874.) During the premonitory diarrhœa he gives 30 drops of sulphuric acid in a wineglassful of camphor water every hour. Should vomiting come on, the chloral treatment is commenced at once by the subcutaneous injection, in 4 or 5 different places, of 10 grains dissolved in 100 drops of water. Sixteen grains is the largest quantity given.

In to-day's daily practice, the most frequent alternative from chloral as a nervous sedative is certainly *bromide of potassium.* The immense use made of the bromides invites constantly renewed experiments upon their mode of action; and such experiments are not lacking. Steinand (*Arch. Virch.*, Bd. 59) comes to the conclusion that all bromine compounds affect the organism only after they have decomposed into the base, and free bromine or bromide of hydrogen—the latter being the active agent. When administered in sufficient doses, they paralyze the cardiac muscle and the excito-motor nerve centres of the heart; and in smaller doses, lower the excitability of the spinal ganglia, of peripheric nerves, and of muscles. Death from toxic doses is due to paralysis of the heart. Eulenberg and Guttman (Du Bois Rey., 1873), however, whose experiments are reported in the *Centralblatt*, 1874, refuse any special influence to the bromine of the bromides. They find bromide of calcium quite analagous in its action to bromide of potassium, only weaker. *Bromide of camphor*, although analagous in its action, seems to possess some special value. Introduced by Hammond in 1872, its properties have been minutely investigated for the first time by Bourneville, and the results reported to the Société de Biologie (*Gaz. des Höp.*, 1874). Bromide of camphor is a compound in which

one equivalent of hydrogen in the camphor is replaced by one equivalent of bromine. Experiments upon a young cat were made with subcutaneous injections of a solution containing 45 grains of the bromide, f℥ix. of alcohol, f℥vss. of glycerine. The injection of 10 grains was fatal to the animal, but with 8 grains the temperature fell in 4 hours from 37.9 to 84°, nor did it become normal again until 85 hours later. With the fatal doses, the temperature fell from 39.1 to 84°, and death took place in two hours—a profound hypnotism was rapidly induced—whilst at the autopsy was found complete absence of congestion of the nerve centres. Together with the fall of temperature, were observed a diminution of the pulsations and respirations, and contraction of the vessels of the ear.

Therapeutically, Bourneville has experimented at the Salpetriere on various nervous affections. A case of insomnia connected with cardiac disease was cured by the bromide of camphor, in doses of from 0.10 to 0.60 centigrammes; a locomotor ataxy was ameliorated by doses of 0.80; a chorea of 20 years' standing was ameliorated by 1 gramme and 20 centigrammes. In three cases of paralysis agitans, the agitation was diminished by doses of from 0.20 to 1.00. The bromide was also successful in hysteria or hystero-epilepsy, and in headache arising from mental excitement. The maximum dose at any one time was 15 grains.

Croton-chloral is another nerve sedative recently introduced, to fulfill the indications for which the hydrate of chloral and the bromides are so frequently given, and where they have failed. The *Amer. Jour. of Med. Sciences*, April, 1874, quotes Liebreich's experiments of the preceding year. The ingestion of ℥j produced a deep sleep in 15 minutes, with anæsthesia of the fifth pair of nerves. The tonicity of the facial muscles was unaltered. When it is administered as an hypnotic in mania, the patients fall asleep in a sitting posture, while the pulse and respiration remain unchanged. If an equal degree of anæsthesia had been produced by hydrate of chloral, the patients would have fallen from their chairs, and both pulse and respiration would have been retarded. Liebreich considers croton-chloral indicated, therefore, when very large doses of the hydrate are required to produce sleep, or when it is altogether inapplicable on account of heart disease, or finally, as a successful substitute in the treat-

ment of trifacial neuralgia. In tic douloureux it is only a palliative.

Bunsun Baker reports, in the same number of the *British Medical Journal*, 5 cases of neuralgia cured by 1 grain doses of croton-chloral repeated every hour during from 3 to 6 hours. Two of these were facial neuralgias, one from concussion of the spine, one neuralgia and dysmenorrhœa, one general neuralgia.

Sidney Ringer recommends the croton-chloral (*Brit. Med. Jour.*, Nov. 21, 1874) in 5 grain doses for the relief of sick or nervous headaches. A stupid feeling that is often left afterwards is easily relieved by bromide of potassium.

In the third volume of the *Archiv für Pharmakologie*, Mering reports physiological experiments with croton-chloral, which show that the respiration, frequency of the pulse, and the blood pressure, are all notably lowered by a subcutaneous injection of croton-chloral. In this the author contradicts Liebreich's observations on human beings. He equally opposes the theory of Liebreich, according to which the croton-chloral acts after decomposition into allyl-chloroform (consult Liebreich, *Brit. Med. Jour.*, 1873). Mering considered that the effects of croton-chloral, as well as those of chloroform, depend on paralysis of the vasomotor centre or centres, and that the blood vessels are paralyzed before the heart. This theory is probably incorrect for chloroform at least, whose effects on the pulse are unaccompanied by the cutaneous flushing or dilatation of blood vessels, which is admitted to indicate their paralysis. Were it otherwise, indeed, there would be no sense in the experiments recently made by Dabney (*Trans. Med. Soc. Va.*, 1873) upon *nitrite of amyl* as an antidote to chloroform. Puppies were anæsthetized until the cardiac impulse was almost imperceptible, and then Mv nitrite of amyl was injected subcutaneously. It acted as an immediate restorative, and the success was permanent in three out of four cases. Analogous experiments have been repeated on the human subject, where chloroform inhalations had threatened to arrest the respiration. In three cases reported by Badeau, of London (*Lancet*, May 8th, 1875), the application over the mouth and nose of a few drops of the nitrite (three to ten) was followed in a few seconds by a deep inspiration, flushing of the face, acceleration of the pulse, and a return of sensibility. In two of

the three cases vomiting occurred. though no food had been given for several hours.

The *American Jour. Med. Sciences* calls attention to the fact that, as early as 1870, Dr. Burrall, of New York, had recommended, on theoretical grounds, the use of nitrite of amyl in chloroform poisoning. He recommended it, however, against threatening syncope; but in at least two of the cases just quoted the danger was not of syncope, but from asphyxia. In either case, however, the nitrite of amyl must act by facilitating the action of the heart by sudden dilatation of the blood vessels. It is the restoration of the circulation in the lungs which averts asphyxia.

The monograph on nitrite of amyl, by Pick, published in 1874, sums up its action into that of determining a relaxation of all unstriped muscular fibre, especially that of blood vessels, causing their rapid dilatation. This action is especially marked in the upper part of the body. The nitrite is, therefore, to be recommended for all affections involving vascular spasm, hemicrania, epilepsy, eclampsia, angina pectoris. It has been given by Fenckel (*Deutsches Archiv.*, Bd. 14 Heft. 1st) in cardialgia, and this practice has been repeated by others with success. Dr. Munde, in his report on obstetrics read before this society, has alluded to the recent employment of nitrite of amyl in spasmodic dysmenorrhæa.

A most interesting series of pathological experiments has been made by Voisin at the Salpetriere, on the use of *morphine* in the treatment of various forms of insanity (*Bull. de Therap.*, 1874). Forty-one cases were treated, of which 25 were cured and 11 ameliorated, while 5 received no benefit. The morphine was administered by subcutaneous injection once or twice a day. Benefit was derived only when the following physiological effects were produced: redness of the face, cessation of the contraction of facial muscles, with consequent return of natural expression; sensation of heat; increase of weight; increase of menstruation. Sleep and vomiting, though not invariable, were very frequent, the latter being in no wise a contra indication. These various phenomena were associated with a relaxation of vascular tension, demonstrable by the sphygmograph, and Voisin very plausibly explains the beneficial influence exerted upon the mental disease

as a result of increased flow of blood to the brain, and, therefore, better nourishment of its tissues. Morphine should, therefore, be indicated in so-called functional insanity dependent on alterations of the circulation, not yet accompanied by structural dangers. Also in type mania, or mania associated with neuralgia that has given rise to hallucinations, morphine will often dissipate the hallucination by curing the pain.

It is formally contra-indicated in all forms of congestion as indicated by fever, and also in atheroma of the cerebral blood vessels. In the latter case, Voisin fears a rupture of the vessel from the increased afflux of blood; but as, according to the hypothesis, this afflux depended on relaxation of the blood vessels and lowering of their tension, we do not see that this fear is theoretically justified. In the cases cured the disease had lasted from ten days to two and a half years—on an average, six months. The doses of morphine administered varied from gr. ss—vj a day.

Finally, among nerve sedatives, we must mention *gelseminum* whose rising reputation is being steadily maintained. Sawyer (in *Brit. Med. Jour.*, May, 1874) strongly recommends it for facial neuralgia, in doses of 5 to 20 drops every six hours. He reports 16 cures out of 20 cases in which the gelseminum was tried.

On the other hand, neuralgia is reported to yield equally to stimulant treatment—at least, to the peculiar stimulus of the central nervous system supposed to be afforded by *phosphorus*. Dr. Bradley reports a case to the *London Lancet* cured by the so-called mother tincture, consisting of a one per cent. solution of phosphorus in ether. Of this solution 5 drops, containing $\frac{1}{20}$th of a grain, was given. The patient, who had been suffering from attacks two or three times a week for some years, was at first relieved, and finally altogether freed from pain for four months.

Dr. Ashburton Thomson (*Brit. Med. Journal*) has written an essay on the employment of, and announced various dicta in regard to the tonic, stimulant, and toxic properties of phosphorus, which agree with the opinions generally held, but unfortunately fail to substantiate them by any more precise proof than may be derived from clinical observation. "It tends," he says, "to renovate exhausted nerve function and reconstruct altered nerve matter," which is certainly a valuable tendency—if it exists.

But on this hypothesis it has been administered in epilepsy in a child of four years, who had an attack every 28 days. One-thirtieth of a grain was given in alcohol and glycerine every 4 hours, and the paroxysms were interrupted for 5 months.

But the most important nerve stimulant is still *alcohol*, and the most vexed question concerning alcohol is still whether or not it is to be considered as food. Almost the last experiments made by the lamented Dr. Anstie are devoted to proving, contrary to the famous conclusions of Lallemand, that alcohol *is* oxidized in the body, or else undergoes some other transformation that equally results in the creation of force; for elimination by either lungs or kidneys is altogether insignificant, at least according to the tests employed by Anstie. To a dog was given 47.73 grains of absolute alcohol in the course of 8 hours, and there was eliminated by the kidneys only $\frac{1}{5}$th of a grain. The urine was tested by the bichromate of potash. Elimination by the lungs was also practically *nil*, or only 1.13 grains in 24 hours after ingestion of 190.92 grains of absolute alcohol. From the body, after the ingestion of this amount, only 23.66 grains were recovered. Anstie infers that alcohol does unquestionably act as food, and not as a mere transitory stimulus. Towards this conclusion, indeed, the general opinion of the scientific world seems to be gradually turning, and it is unequivocally adopted by Marvand in his treatise upon *Tissue-Saving Foods*.

Anstie justly deprecates the short-sightedness that, in the interests of philanthropy and temperance, would try to falsify the concurrent results of recent experiment, and refuse the title of food to alcoholic liquors.

[To be continued.]

ART. II.—*Cases of Spider Bite.* By G. WM. SEMPLE, M. D., Hampton, Va.

Spider bites are of rare occurrence in this vicinity, but are generally productive of very grave symptoms. I will report all that have occurred to me in a practice of 40 years:

CASE I.—*September* 4, 1853. I was called to see Mr. D., at Old Point, who had been bitten by a small, black spider on the prepuce, whilst on the privy seat, at $12\frac{1}{2}$ o'clock. The bite at

first caused only itching of the prepuce, with a little redness of the part, but in less than half an hour nausea, followed by severe abdominal pains, ensued. A messenger was despatched in haste on horseback for me to Hampton, three miles off. Before I reached the patient, at 2½ o'clock, violent præcordial pains extending to the axilla, and down the arm and forearm to the fingers, with numbness of the extremity, had succeeded, attended by apnœa. In consequence of the violence of the symptoms, Dr. Stineca, surgeon of the post, had been sent for, who had given two doses of laudanum of ʒj each, and two of rectified whiskey of ʒij each, and being in ill health and unable to remain, had ordered his hospital steward to apply 4 dry cups over the præcordia.

This had just been done when I arrived. I saw the blood, thin and florid, fill the cups like water oozing through muslin. When the cups were removed, the blood, emptied into a basin, did not coagulate; and blood continued to ooze slightly from the surfaces to which the cups had been applied until the next morning, though a solution of tannin was applied. I found the patient suffering extremely from the most violent præcordial pains and from apnœa, and also violent pain in the left arm, which was almost paralysed. His pulse 130 and very feeble, his skin cold as marble, and his countenance expressive of the deep anxiety he felt and expressed in words. The laudanum and whiskey seemed to have produced no effect—the nausea and abdominal pains having subsided before they were administered. There was no pain, inflammation or swelling where the bite was received. Even the itching of the part had subsided. I gave the patient every half hour for several hours ʒj of aromatic spirits of ammonia, and as much whiskey and water as he could be induced to take, and afterwards gave them every hour; also pediluvia of hot mustard and water, frequently repeated, until the next night.

8 A. M.—The symptoms continued unabated; indeed, the patient grew worse until 2½ o'clock, 26 hours after he was bitten, for his pulse had then become so frequent that it could not be counted, and so feeble that it could scarcely be felt. He then vomited black vomit copiously—a quart or more. Soon afterwards re-action set in, his pulse gradually regained force, and became less frequent, the pain subsided and the respiration improved. At 8 P M., the pulse had gained considerable force, and the patient slept until some minutes after 12, when he awoke; his pulse was pretty full at 1.10; his surface warm and perspirable, and he felt almost free of pain. After a short interval he again fell asleep, and slept quietly until morning, when

he awoke—his respiration healthy, pulse 80, regular and with sufficient force, and entirely relieved of pain. He soon afterwards had two pretty copious evacuations from the bowels, similar to the black vomit he had vomited. After this, he said he felt quite well, and took a light breakfast and dinner, and returned that evening to his residence in Portsmouth, and in a few days went to work at his trade.

In 36 hours from the time he was bitten, he took three and a half quart bottles of the best rectified whiskey—about three quarts without showing the least symptom of intoxication.

Case II, I report from memory. About June 20th, 1861, on a scout with a party of cavalrymen under command of Major Hood (afterwards Gen. Hood), in a woods about 4 miles northwest of Newport's News, a man belonging to Captain Goode's (Mecklenburg) troop, about 3½ A. M., just as the order to saddle was given, cried out that he was bitten by a spider, and called for me. He was bitten in the groin, and complained of only a slight pricking and itching at the spot where he was bitten, but was complaining of severe abdominal pain, with nausea, and a sinking sensation at the epigastrium; and his pulse, in a few moments after the bite, had already become quick and thready, and the skin very cold. I immediately commenced the administration of aromatic spirits of ammonia and whiskey, as in the other case. He was moved on horseback with the party about a mile and a half, a good pallet of blankets was made for him in a thick shade, and he was rendered as comfortable as possible. The symptoms followed the same course as in the first case, but amendment commenced about 12 M., when all my supply of whiskey—one and a half quart bottles of the very best of my own private store—and all the supply of spirits of ammonia were exhausted; but the commencing reaction was sustained by a pint of whiskey procured (the last he had) from a friend of mine hard by, and by 5 o'clock he was well enough to be taken to Cockletown, some 10 or 12 miles off, in a spring wagon, where he arrived quite well, after an upset going down Harwood's mill hill. There were no symptoms of intoxication in this case.

The spider which inflicted the wound in this case was killed and examined by the patient, and proved to be a small, black spider. Each of these two patients was a healthy man in the prime of life; exact age not known.

Case III.—I was called about 10 A. M., Oct. 6, 1867, to see young W., 18 years old, who had been bitten by a spider of the

same sort the night before, about 7 o'clock. The bite in this case was on the back of the left hand. There was no pain, but only itching and redness at the part bitten at first; but violent pain soon commenced there and extended in a short time up the arm and forearm to the shoulder, and thence to the præcordial region. Plantain and some other domestic remedies were applied to the part without relief. When I saw him the symptoms were grave enough to excite the apprehensions of his parents, and to produce very great suffering in the patient, but, though like the two former cases, were by no means so severe. Milk punch, in which form alone the patient would take whiskey, was given freely, and 10 grains of bromide of potassium and 10 of bromide of ammonia, with 3 of iodide of potassium and ʒj of aromatic spirits of ammonia, were given in water every hour for 4 hours, when the patient was quite relieved.

Case IV.—A quadroon mulatto woman called on me about 12 o'clock, the night of Sept. 23d, 1874, to visit her daughter, a tauney woman, healthy, about 22 years old, the mother of two children, who she said was suffering very greatly from pain in the right arm and shoulder, caused by the bite of a spider, small and black, which she killed when inflicting the bite about 7 P. M. Being in a copious perspiration following a fever from cold, I declined to visit the patient, but prescribed for her as in the last case. One dose of the medicine and punch was given, but the patient growing worse, the mother would give no more. She called me up soon after day, begging me to go immediately to see her daughter, whom she thought was dying. I found her apparently moribund; her skin as cold as marble; violent pain extending from the bite on the right wrist up the forearm and arm to the shoulder, and thence up the neck to the back of the head on the right side; more violent pain in the præcordia, extending thence to the shoulder and axilla on the left, and down the arm and forearm to the ends of the fingers, and this extremity partially paralysed; added to this, apnœa was extreme; the respiration only occasional—gasping; the pulse could not be felt in the left radial, and I was not sure that I felt it in the right. Having seen accounts of Halford's practice of injecting aqua ammoniæ into the veins for the bites of Australian serpents, and satisfied that no other treatment of which I had any knowledge would act promptly enough to avail anything in this case (though I could not remember of what strength Halford used the ammonia) I determined on its use; and as the water to be had in the house was charged with salt, alum and other impurities, to inject the strong aqua ammoniæ undiluted, a small

vial of which I had taken with me. The superficial veins of the patient were very irregularly distributed. One, the largest in the arm, ran up the middle of the belly of the biceps. Charging my hypodermic syringe with 13 minims of aqua ammoniæ, I introduced the point carefully into the vein, about the middle of the arm, holding the syringe almost parallel to the vein, and satisfying myself, by lifting the point, that it was certainly in the cavity of the vein, I injected about two minims, and, waiting an interval of about a minute, about 2 minims more, until I had injected ten minims. I was then about to withdraw the syringe, when the patient gave a spasmodic jerk of the forearm, pressing my right arm forward, and so pressing the point of the syringe through the vein into the cellular tissue, and sending home the piston, injecting the remaining three minims into the cellular tissue. I withdrew the syringe and placed my finger on the pulse, where I held it about five to ten minutes. Feeling that the pulse constantly grew stronger and the skin warmer, I walked across the small room, washed out the syringe, and replaced it in the case, when, turning and looking at the patient, I was astonished at the calm and painless expression of her countenance, so lately expressive of extreme anxiety and pain. On examining her pulse, it was full, regular, and beating only 77. The skin was warm and perspirable, and the respiration natural. She seemed to have been snatched *articulo mortis* and restored to health. To my question, How do you feel? she replied, The most I have to complain of is the smarting where you stuck me in the arm. On examining it, I found a blister there as large as my thumb nail. A slough took place in a few days as large as a nickle cent, which almost healed up kindly until she irritated the small remaining healthy ulcer while carrying a child on the arm to a picnic.

Though a slough was the consequence of the injection in this case, yet it conclusively proves that dilute aqua ammoniæ may be safely injected into the veins; that it is only necessary to take care that none be injected into the cellular tissue, since no inconvenience followed the mingling of the strong ammoniæ with the blood in the vein, but only from its injection into the cellular tissue. To guard against such accidents, it is only necessary to open the vein to be injected with a lancet, and use a bulb-pointed syringe.

Case V.—*September* 28, 1875. I was called at 7 in the evening to see Miss D., a healthy young girl, 13 years old. At about 5½ o'clock she had thrust her right hand through a spider web into a rose bush to pluck a rose. She felt a stinging sensa-

tion on the wrist, accompanied by itching and redness at the spot. For several minutes there was but little pain, but in half an hour a painful sensation began to be felt at the spot, which quickly extended up the arm to the shoulder, and, in the course of an hour, along the neck to the back of the head. Several domestic remedies were applied to the spot supposed to have been bitten by a spider, but none affording any relief, and pain in the præcordial region, with apnœa coming on, I was sent for. When I arrived, she was screaming fearfully with pain, and frequently exclaiming she should lose her breath and die. The pulse had become thready and the surface cold. I had the bitten part rubbed with volatile liniment, and gave her at once the bromides of potassium and ammonium, and iodide of potassium with aromatic spirits of ammonia, and ℥jss of whiskey, with water. Soon after swallowing the whiskey and water, she said she felt a glowing sensation in the stomach, and not long after a general glow. The skin became warmer, and the pulse grew stronger, with considerable abatement of the pain.

At 8 P. M., a second dose was given; reaction continued to be developed, the pulse and respiration to improve, and the pains to abate. Just before 9 P. M., she fell asleep, and when I visited her in the morning, had gone to school quite well.

The question arises, to what was the prompt recovery due in this case? Was it to the local application? Perhaps so; but more probably to the ammonia compounds finding from some cause an unusually ready admission through the portal into the general systemic circulation, not being eliminated in the bile by the liver, to be re-absorbed and required to go this round several times perhaps before gaining admission into the systemic circulation. That this is not unfrequently the case in regard to our remedies, is rendered probable by what I have often observed in the treatment of pneumonia with the carbonate of ammonia, and which, I doubt not, others have also observed, viz., that after having been administered for 24 to 36 hours without apparent effect, it will suddenly produce its best effects on the pulse and respiration. To what other cause can this be attributable than that I have mentioned? But if aqua ammoniæ can be safely injected into the veins, and produces the same effect we seek to procure by the administration of carbonate of ammonia in pneumonia, in increasing the force and diminishing the frequency of the heart's action, why should we not resort to the injection of the former in the treatment of pneumonia, and in all cases in which the same effects are desired?

ART. III.—*Diphtheria.* By M. I. MOSES, M. D., New York.

The problems of medicine are worked out from era to era into dogmatic results, and the pathological investigations of one observer may be adopted by cotemporary practical workers, till new discoveries, made by new discoverers, overthrow the theories which, until then, had stood the test of criticism successfully. Each department of medical science has felt the shock of these revulsions, and where views of pathology were changed, treatment was modified, and therapeutics revolutionized. The thorough sublimation of facts from surrounding and entangling uncertainty has rendered some of the phenomena of disease perfectly plain and demonstrable, and in organic lesions the means of investigation and research have been so cultivated and refined that diagnosis at the hands of experts, generations apart, will yield the same result.

The theories of practice may change, the methods of examination be improved, but the lesions which clinical accuracy now so certainly demonstrate, and which post mortem observation so conclusively prove, can scarcely ever be expected to reach a higher development than is now attained. Thus, organic defects of the kidney and heart can be demonstrated with a positiveness which assumes a dignity of scientific fact, giving medicine on these subjects, privilege of rank among the fixed sciences. But the constant discovery of new pivots, upon which pathological principles may revolve, divests any *theory* of a claim to *certainty*, and the danger to science lies in the too prompt acceptance of plausible hypotheses.

To no disease, possibly, may these remarks more fitly apply than to diphtheria, as, within as many years, ten or more theories have been advanced, accepted, and, in turn, discarded, relative to the etiology of the malady.

Whilst laborers in the fields of science have been elaborating the theories, treatment has oscillated and been adapted to each observer's views, without developing one new feature, evidencing by a successful antagonism to the disease, a positive improvement in therapeutics. One of the latest, the so-called "bacterian theory," if argued by the rule of *post hoc, propter hoc*, is

infallible; but this argument is dogmatical, as would be its dismissal without due regard of its plausibility or its probability.

Every essayist on diphtheria sees fit to expend a portion of his time in convincing others that his observations have extended through the *whole* literature, quoting authorities from the buried past—digging up the remains of our honored predecessors to prove how, not recognizing the true asthenic nature of the malady, they pressed mercury to ptyalism and venesection to syncope, and then wrote memoirs on the subject.

Almost every encyclopœdia contains the history and etiology of diphtheria, and the numerous monographs are prefixed or supplemented by a long list of bibliographical references, which enables any compiler to "write up" the question; and, if said compiler is particularly ingenious, to slip in a few undigested ideas of his own, without much fear of being noticed or contradicted.

Thus has the study of this fearful malady been surrounded by almost insuperable difficulties, and, therefore, at this moment, when, between the actual ravages of the disease and the terrors of the panic (the latter maintained and fostered by bad diagnosis and fraudulent returns), a few words of practical value would not be amiss.

Whilst Oertel propagates the "bacteria" on the one hand, and others slay the theory and accept his arguments, with the bacterian element left out, there are many still who, recognizing the *plausibility* of the local origin of the malady, believe that the disease, like other zymoses, develops *within* the economy, encouraged by local or endemic influences, and manifesting itself in a local affection, as the result of constitutional *impressment*. The advocates of the local theory account for the constitutional symptoms by a principle of intoxication, resulting from absorption through the lymphatics of a *materies morbi into* the economy as a *secondary* lesion.

That diphtheria is a specific poison, both sides admit; that it is contagious or infectious, neither would care to deny; and, therefore, the question of the peculiar material creating the disease being in argument, would be of little practical importance were it not for the fact that the question which divides them—

namely, the local or constitutional inception of the toxic element—influences too materially the direction of treatment.

The difference between the nature of scarlatina, measles, whooping cough and other zymotic diseases and diphtheria, in regard to the immunity offered by the former, and *not* by the last, against second attacks, is an argument advanced by those advocating the doctrine of local origin; and they bring many strong arguments to bear to sustain the theory. But the intrusion of as strong facts to prove that certain physiological conditions control the manifestation of the disease amid the most powerful contagious and infectious exposures, would somewhat dampen the ardor of one too ready to adopt the local theory. For instance, it has been established beyond doubt that children under 9 months old are not often attacked, though the atmosphere around them be epidemically full of the disease germs. (?) *This* discovered fact suggests that there must be some constitutional bed, at least, upon which the material necessary to produce diphtheritic manifestation must be planted, for, if location were all, the fauces of a child of 6 months offers as many inviting points of rest as that of a child of 9 years. Further than this, experience goes to prove that adults, though in instances affording many records of dangerous and fatal cases, are yet less subject to its invasion in a bad form than are children. These observations establish one fact, that certainly constitutional peculiarities exercise *some* influence upon the development of the disease. This influence of special constitutional resistance makes it in this regard claim kin with the other zymotic maladies—scarlatina often sparing the nursing child and victimizing a family of growing children—and again, after 30 years, being but rarely witnessed.

Those who defend the local theory point to cases where the patient, having the local manifestation, recovers without serious constitutional derangement, whilst their opponents point them to mild cases of scarlatina, where, but for the rash and desquamation, the patient would suffer scarcely a malaise. The constitutionalists, moreover, revert to the fact that oftentimes prodromic symptoms, headache, increased temperature and disordered secretions, usher in the trouble, and *evidently* precede the local manifestation. These arguments, these dogmatic facts on the

one side, and dogmatic refutations on the other, leave the question open to those who do not dare doubt the one, and do not *want* to doubt the other and open the door to a *new* theory.

Not many years since, the theory of the duality of syphilitic lesions was cautiously advanced, cautiously received, and, after a short while, by a large number of our best thinkers adopted and sustained. Both poisons prove to be specific, are certainly much alike in some respects, and yet one is a local and the other a constitutional malady. So much alike have they been found that, without the history of incubation, they can be, and often are confounded, even by experts, and the *mixed* character has now been demonstrated in some primary lesions. The course of both the chancroidal and the hard chancre is modified by the constitution or temperament of the victim.

To deny that there *is* a difference in the lesions of diphtheria, is to preclude argument; to *prove* this difference by tangible evidence in the way of histology is impossible; and, therefore, just as impossible will it be to account for the innocence and inocuousness of bacteria and bacteridea on one occasion, and their potency to produce diphtheria in another, unless we accept the fact as a fact that some constitutional condition is essential to the inception and fructification of the received toxic element.

The theory of duality of *every* virus is tenable, and may be reasoned by analogy. Vaccine received into the system by voluntary inoculation results in a constitutional affection, and so modifies the system in its relations to variola that the last named malady becomes changed in character in persons so protected; whilst virus taken from the patient suffering from so-called modified small pox, upon being inoculated into a system *not* protected, finds a soil fitted to nourish the inoculation into confluent and malignant variola. It is claimed, with so much plausibility that the theory receives consideration from the most erudite, that syphilization in some way affects the constitutional impressibility of the system, and all of these reasonings go to prove that there are inherent powers of development for the *materies morbi* extraneously applied. A patient will not develop syphilis idiopathically. The same patient may be so prone to inoculation that inoculation is *certain* upon exposure, while others have been found upon whom inoculation has been practised a great number

of times unsuccessfully. Vaccination, well and carefully done, has failed in many instances—all of this going to prove that the system offers at some times open arms to infection, and sometimes turns its back upon it. As certain *internal* influences tend to prepare the system for the better nourishment and development of the morbid elements of disease, so do external or extraneous influences tend to rouse sleeping disease elements into activity. When these external influences are confined to *local* peculiarities, the disease appears in sporadic form, but when the influence is pervading the disease is epidemic. The prevalence of scarlet fever as an epidemic one season, of diphtheria another, of cerebro-spinal meningitis at another, evidences the external character of the influence directing the *type* of the malady. The presence of sporadic cases of scarlatina in a diphtheria epidemic, and *vice versa*, shows at once the ability of either disease being engendered by local influences, the system being ready to nurture either element when called upon to do so.

The entrance, either by direct inoculation or by infectious absorption of any material capable of producing diphtheria is positive, for people *have* local (?) diphtheria, known as "wound diphtheria," and even localists admit that there is a constitutional diphtheria, though they claim it as a sequela to its first invasion.

The theory derivable from the foregoing arguments may, thus be enunciated: *That there are two kinds or species of diphtheria; one originating in the system created by the absorption of an element from external surroundings not in itself a specific poison; the other a local disease due to actual contagion of a specific disease germ, already humanized. That the point of manifestation of evolved diphtheria is the tonsil and velum, and that when once evolved the disease becomes local, and capable of extension by continuity of tissue, the cell changes occurring in catarrhal diseases of the air passages favoring the growth and nutrition of bacteria and micrococci, proved by the microscope to be an element, not of the* DISEASE, *but of the* PSEUDO-MEMBRANE; *that from either the evolved or inoculated disease secondary absorption or septic poisoning may result; that this latter phase of the disease is more to be expected from*

the directly transmitted disease than from the disease of evolution.

The febrile excitement, the headache and general constitutional symptoms preceding the attack, evidence the fact that nature is endeavoring to evolve a poison; and the usual subsidence of the general symptoms on the local throat lesion being manifest, points to a completion of nature's effort of evolution. The disease *then* becomes amenable to local destruction, or, by neglect, to local extension, attended by dangers of septic absorption.

In cases where the disease is due to direct contagion—*i. e.*, to the impressment of the system through absorption of the *specific* or *perfected* disease germ, the constitutional manifestations may be more intense, and assume *ab initio* the character of septic disease. On the other hand, if prior to such absorption, the deposits of the contagious principle be destroyed, the disease may become *entirely* localized, and constitutional impressment *never* ensue.

This view of the subject impels the conclusion that to whatever cause or origin diphtheria may be due, the controlment of the local manifestation is our first duty, guarding thereby against local extensions and subsequent septic absorption; and that the recognition of the local presence of the contagious elements invests us with the power to arrest extention and prevent constitutional disease.

That diphtheria extends locally, in no positive proportion to the amount of constitutional disturbance, attests to the fact that, once evolved, the diphtheritic membranes are capable of sui-generation; and that this generation is due to the presence of *active* vegetable parasites and spores admits of no question. That the destruction of micrococci and the abolition of pabulum, upon which such fungi are vivified, is the *rational* treatment, suggests itself as a fair deduction.

The struggle of evolution results in nervous and vital depression, constituting the adynamic character of diphtheria, and calls upon us for *tonic* and *sustaining* treatment. That the sequalæ (paralysis, &c.,) of diphtheria are due to damages already *pronounced* by a specific poison (no longer active) sepa-

rates their management from the question of diphtheria, and refers us back to general principles.

The escape of one or more persons in a family, the other members of which may be victimized by the malady, leaves us free to believe that those persons are in no condition to fructify the disease element into activity, and the subsequent prostration of the same individuals by diphtheria when under *no* exposure, confirms us in this deduction. Reasoning by analogy, and especially in reference to exanthemata and zymotic troubles, the primary lesion is nearly always located in the pharynx and fauces. The scarlatinous throat, the intense engorgement in variola, the almost constant pain and dryness in the faucial region in erysipelas, and arcus syphilitica (about the earliest syphilitic lesion manifested in constitutional syphilis,) give us the privilege of suspecting that, *like* them, diphtheria which we see upon the tonsils is but ashes from the fire which heats the crucible wherein the original poison is perfected and humanized. Some persons claim that the pseudo-membrane of diphtheria is not an exudation but a deposit, accumulating and growing by extension and external proliferation, and point to the undisturbed epithelium around and margining the membrane; but we have an analogy here in the mucous patches of syphilis, which bears a resemblance in many features to the early stages of diphtheria.

Pathological investigations refer to the influence exerted by the white blood corpuscles in furnishing pabulum and bearing the burden of absorption, whereby the blood crasis is impaired and the red corpuscles devitalized, resulting in the lowered vitality; but investigations have *failed* to establish the existence of the diphtheritic pseudo-membrane as an exudation *within* the tissues underlying the "deposits," and even in the suppuration of glands; they find nothing to indicate that the pus therein contained differs from ordinarily changed white corpuscles.

The want of regularity and sameness of symptoms characterizing the cases of diphtheria, and the absence of positive and progressive stages in the disease, urge us to the necessity of attributing the origin of different cases to different causes. For instance, in scarletina we have a period of invasion: we have the eruption, the pyrexia, the nightly exacerbation and the desquamation. In diphtheria, on the contrary, one class of cases evi-

dence great constitutional disturbance, whilst others have a simple sore throat, which comes and goes without the least regularity either of incubation, residence or resolution.

It is scarcely fair to class such cases as the same, because they perhaps accidentally have *one* symptom in common, viz., pseudo-membrane. Equally unfair would it be to accept bacteria as the cause, from the simple fact of their being found sprouting and increasing in this pseudo-membrane. Lorstofer found spores in syphilitic blood, and the world trembled in exultation at the discovery of the special venom of the terrible scourge, till several observers found *similar* spores in the blood of persons free from personal or hereditary taint.

The main object in pathological research is to discover how to *treat* disease; and this being so, makes the result of cases almost a crucial test of the accuracy of discovery. And when we apply this test, not empirically but as the offspring of reason, we will if honest, lay aside our theories if our tests, fairly applied, fail to establish them. "As one swallow does not make the summer," so one fatal case should not deter us from persevering in the plan of treatment, and giving it an opportunity of sustaining itself; and many times, I am sorry to say, timidity has paralyzed able men, and cut short effort, which, had it persevered, would have established useful facts. Had Sims faltered when the urine flowed through the fistule when he removed the clamp in his first operation; nay, had his energy yielded on his thirty-eighth failure, the accomplishment of his now simple operation would not have been attained. We must, therefore, test our reasoning by practical application, and only yield to the fact of failure after a fair trial.

Upon the theory above advanced the treatment of diphtheria may be thus considered: First, Treatment of evolved diphtheria. Second, Treatment of local or contracted diphtheria. Third, Treatment of diphtheritic septicæmia.

The evolved diphtheria is recognized by the manner of invasion. There is usually either preceding or synchronous with the appearance of deposit in the fauces, the following train of symptoms: Severe headache, malaise, anorexia, and faucial pain, with marked pyrexia. The temperature is not very high, scarcely

ever reaching 103°F., averaging about 101½°. These symptoms generally last about twenty-four hours, when they suddenly pass away, leaving the patient in a condition of prostration not to be expected from the short duration of the initiative stage. Other than the prostration and sore throat, there are no symptoms to make the patient think he is very ill, and the throat presents usually a picture which, if possible results be not considered, would scarcely affright one—a few points of grey membrane on one or both tonsils, or on the columns of the fauces, or possibly on the posterior pharynx, with a dark blush on the mucous membrane of the palate. There is very little pain, and a greater or less amount of difficulty in deglutition—this latter condition being influenced by the location and quantity of tissue involved. In these cases the patient looks as if he had been sick for weeks instead of hours, and pallor is marked, giving the sufferer the appearance of actual anæmia.

When called in such a case the first object is to control symptoms, and after seeing that there is no disordered function which might tend to increase headache, (if there is, correcting it,) we should give our patient, if possible, *rest*, as wakefulness and jactitation are wearing and depressing. To accomplish this end paregoric and nitre with children in doses to suit the age, I have always found to act well; in adults, a half grain of codeine, or 30 grains of potass. bromid, yield happy results. A fever mixture of spts. mindereri, or of chlorate of potassa and hydrochloric acid, may be administered; the reduction of temperature (if pyrexia be marked) may be secured by inunction of cocoa butter, or by sponging the body. Experience has taught me that *nothing will delay or shorten the struggle of evolution, and, except to comfort the patient and treat pressing symptoms, I know of nothing which will be of service in controlling or modifying the attack.*

With the first subsidence of the initial symptoms, (unless the deposit be extensive and coincident when local measures should be *at once* adopted,) two indications are offered: *First*, local application, and *then* vigorous and energetic use of sustaining and tonic treatment. First, paralyzation of the septic and dangerous elements contained in the membrane must be attempted and then the separation of the patches must be accomplished as soon as possible, not by forcible detachment, but by a species of des-

quamation. I have at different times tried various applications and compared results, and carbolic acid applied in its purity to the points within reach has proven itself superior to iodine, chlorine, iron, the hyposulphites, or any other application. Nitrate of silver I have found entirely untrustworthy. The application of the acid should be made at least twice a day, and may be accomplished by a piece of cotton twisted upon an ordinary probe. If the disease occur in an adult, or in a child old enough to assist itself, Oertel's recommendation of the use of steam, persistently applied, is the most rational, and, in my hands, has been the most successful method of detaching the membrane. This, of course, is impossible in infants or intractable children ; but when it *can* be used, if thoroughly applied, will rarely fail in accomplishing satisfactorily what is intended by its employment. The best way in which it can be applied is by means of a wide mouth vessel containing hot water, the vapor being permitted to enter the throat by the patient opening his mouth over the vessel and breathing through his mouth and nose *simultaneously*. The remedy is perfectly inert if the patient merely opens the mouth and breathes through his nose alone ; for he will then be obliged to shut off the communication between the mouth and nasal passages by pressing his tongue to the roof of the mouth anterior to the tonsils, and consequently the steam would never reach the parts to which it should be directed. The mixture with the water of a little carbolic acid (say one minim to the fluid ounce) may be beneficial ; but many patients are found whose sensitive lungs render even this small quantity worse than useless by provoking cough and a feeling of strangulation. Accurately as Oertel describes its action it will scarcely ever disappoint those who employ it, and the membrane will be loosened and come away in shreds, mixed with pus cells, leaving the subjacent tissues sodden, swollen and intact. A gargle, containing chlorate of potassa, will be of eminent service, acting by the value to be derived from the mechanical effect of the act and by the detergent properties of the salt. In the already pronounced septic form of diphtheria, Dr. Jacobi recommends persistent nutrition for the purpose of filling the hungry mouths of the absorbents which, unless they are full of nutritive matter, are not too fastidious to accept a meal of fungi and spores. Be this clinical observation accurate

or not, it stands to reason that a devitalizing disease like diphtheria requires of us to support and nourish our patients—of course whilst keeping in mind the fact that the stomach, in atonic sympathy with the rest of the economy, must be treated tenderly and with due regard to its vitiated powers.

The nervous phenomena as results of, and not as the essential parts of the malady, (such as paralysis, chorea, &c.), require to be separately considered and studied, and will not here be more than passingly mentioned. It is well to be remembered that the frequency and intensity of the paralysis or other nervous features, do not depend so much upon the violence of the preceding attack of diphtheritis as upon the quantity and location of the deposits. My own experience has forced upon me the conclusion that naso-pharyngeal diphtheria is to be credited with the greatest number of paralyses. Post-mortems in fatal cases show various results—in some hyperæmia; in others inflammatory changes in the brain and cord, and these results as yet have not been classified or explained satisfactorily. The treatment based upon "general principles," (which means strychnine, arsenic, iron or galvanism), is the adopted plan, testimony balancing the value of each mentioned agent. Jacobi believes in the efficacy of strychnine, and claims successful results. The question of the management of diphtheritic paralyses is open, and the blank pages yet to be filled by theories and by experimental records are beyond estimate.

How soon will come the time when the whole subject can be read by the student as established fact, is hidden from our sight and calculation. Till such time arrives let each practitioner, by carefully watching his cases and the varying phenomena, endeavor to clear away some part of the tangled web which now clouds the pathology of the disease which has scourged the land.

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ART. IV.—*Vaccination.* By A. W. FONTAINE, M. D., New Canton, Va.

In this the last quarter of the nineteenth century there are very few to doubt that vaccination is the most efficacious preventitive of small pox. That admitted, the importance of its

application must, as a matter of course, be acknowledged. Yet we find in many of the most enlightened nations of the earth very many who are strenuously opposed to it. Why is this? Is there no plausible reason for it? It is to be feared there is. Perhaps no one can yet assert without a prompt contradiction, seemingly, at least, supported by facts, that vaccination has never done any harm. And such assertion can never be made good so long as there is such gross ignorance and reckless carelessness among many of those who practice it with so much culpable indiscretion,—those who will take virus from almost any arm and insert it into another because they do not *believe* that other diseases than vaccinia may be transmitted with it or instead of it. The mere *faith* of the operator in such cases can prove no miraculous safeguard to the subject. The vital question in this matter is not what the doctor believes about it, but rather does he *know* that it is impossible to innoculate along with vaccine lymph such fearful maladies as cancer, scrofula, syphilis, tuberculosis, etc., etc.

It is not proposed here to give all the arguments *pro* and *con* as to the innoculability of such diseases. Many volumes have been written on both sides of this question, and many more are likely to be written before this dispute is practically settled. Perhaps no one man ever did or ever will live long enough in the enjoyment of adequate opportunities and facilities for dispelling all doubts upon the subject. In the meantime, the clear and binding duty of each member of the profession is to act on the *safe side* in premises involving such heavy responsibility. The very incertitude resting on the subject makes individual accountability all the more weighty. Yet what utter indifference or criminal want of knowledge is manifested by many of those who should be, as they are morally held to be, the guardians of health, and consequent happiness to the human race! Until we can show to the satisfaction of all rational thinking men that no harm has been or can be done by indiscriminate vaccination, we must expect opposition to it, and that on *just grounds too.*

What I propose here to offer in furtherance of this object has no claim to startling originality or special merit. But what I do claim is, that it is the duty of somebody to jog the professional mind, if only by reiteration of well-known facts, to some degree

of vigilance and activity in the prosecution of this matter. I do not profess to know how it is with the profession in other States and countries, but it is tolerably certain that among us here in Virginia there is a degree of laxity and inefficiency touching this particular that is not at all creditable to any body of scientific or philanthropic men. In the cities and large towns of one State perhaps this would not apply as a rule, but in the more sparsely settled districts of country there is little doubt that it would.

To meet the difficulties of the situation—1. It would seem there is needed a wider diffusion of such knowledge as we have, not only among the profession, but the people; 2. The most rigid care in the selection of the virus to be used, the best means of preserving it, and the most skillful and effectual method of applying it; 3. Such legislation as is best calculated to encourage and enforce the above conditions.

I. It is assumed that there is no better medium than the many and excellent medical periodicals for reaching the medical mind of the country, and through it the public attention, on all subjects bearing on the physical well-being of the people. And yet how little do we see there on this important subject, and how seldom do we see that little! Many men of first rate standing in the profession, who have kept pace with all the great discoveries and improvements of this fast age which relate to the general and special branches of medical science, know no more now about vaccination than they did in the day of their graduation, twenty, thirty, or even forty years ago. Now, if by this means I can start the ball in motion, the main object of this writing will have been accomplished, and it is to be hoped that it will be kept going by abler and more skillful hands until it shall have been brought against the sleepy noddle of every easy-going doctor in the land.

II. *The selection, preservation, and application of vaccine virus.*—With this branch of my subject the name of the late and much-lamented Dr. James Bolton, of Richmond, is most intimately associated. For the last ten or fifteen years of his life his interest in vaccination was very great; his zeal in its behalf amounted almost to enthusiasm. In the investigation of the subject, in the prosecution of its practical details, he brought to bear the energies of a well-stored and conscientious mind, with a zeal and an ingenuity very remarkable. To say that the profession

and people of Virginia, up to the time of his death, owed more to him in this behalf than to any other man that ever lived and worked among us, would hardly be telling all the truth. After this slight tribute offered in gratitude to a kind friend and most worthy exemplar, what is to be said on the practical bearings of my subject cannot be better presented than as I have learned them from him. It was my good fortune for several years to be in frequent correspondence with him, and often accessorial, in a small way, to his experimental proceedings, but more especially in the prime object of keeping the people *protected by vaccination* and making suitable returns of *pure and reliable* virus to him as vaccine agent in Richmond. In this way I picked up a good deal that I think should be recorded and afforded a free circulation, at least, among the profession of our State.

Dr. Bolton did not believe that *effectual* vaccination ever propagated any of those constitutional maladies mentioned in the early part of this paper. In other words, he thought that though such contamination might be introduced into the system along with the cow-pox virus, yet if the latter took effect and developed in regular process, it would entirely destroy the germination and development of the former. This, of course, was a mere opinion. Confirmed as it was in his own mind, he still respected the prejudices of others on that head, and acted accordingly.

The following—with no very essential qualifications or modifications—were the practical deductions impressed on my own mind during my communications with Dr. Bolton on this subject:

(a) *Selection of Virus.*—We should not take virus from the arm of a "healthy child" merely because it is healthy, without regard to its parentage and antecedents, even to the grandparents on both sides, if our search can reach so far. Hereditary syphilis, and even the germs of cancer, might lurk in such a system unsuspected; for syphilis would hardly be known (or spoken of, if known,) in the family, whilst cancer, being of such slow and uncertain development, for the most part, might escape or defy detection. The glandular diseases and skin eruptions of a scrofulous origin are not so apt to be overlooked. The same may be said of erysipelas and its congeners. But tuberculosis, in its early stages and various seats, might easily escape notice. Assuming that these, or any other diseases, can by any possibility

be innoculated, we cannot be too cautious in this direction. Therefore, *only* the proceeds of *primary vaccinations in healthy children of healthy parents and grand-parents* (so far as can be possibly known) should be accepted as stock from which to promulgate vaccine protection on any community; and if such cannot be had, it were better to go back to the original source and use the non-humanized cow-pox virus, than run such serious risk. But when such matter *can* be had, it is worth—

(b) *Preservation.*—Dr. Bolton, after many ingenious experiments in the protection of vaccine crusts from deterioration, finally concluded that the following is the best: First, wrap the crust in tinfoil or waxed paper, and then insert it in a little gutta percha ball, made soft by working in hot water until it is as pliable as shoemakers' wax. When the gutta percha cools and hardens it forms a protecting envelope entirely impervious to air and moisture, and perfectly resistant to any ordinary mechanical violence, so that it can be transported across the sea or through the mails without injury. I have used some that he put up in this way after two months, and found it effective.

Another rather curious circumstance (which may be mentioned in passing), and for which I think Dr. Bolton might have claimed originality, is this: that vaccine lymph is capable of some degree of *cultivation*. When acting as vaccine agent for the Confederate Government during the late civil war, he was often sorely pressed for a supply of virus. Upon some such occasion he had to resort to the premature removal of some scabs on the fourteenth day. These were used on some of the soldiers, and in their turn were taken off on the fourteenth day, and so on until after several trials; the pustules *matured* at that age, and were readily removed without any impairment of the constitutional phenomena. He kept up a stock of this virus for a long time, and gave me the opportunity of verifying the success of his experiment repeatedly.

(c) *For the best method of using vaccine virus*, perhaps no appliance has ever been devised which combines neatness, cheapness, convenience, and effectiveness more perfectly than that used by the gentleman whose name has been so often mentioned in these pages. It consists of two plates of very thick window-glass, about 1½ by 2 inches in dimensions, and a common thumb

lancet with a bit of the point broken squarely off, thus leaving a sharp angle on each side of the fractured point. This cheap and simple apparatus, with the modifications now to be mentioned, I have found all that could be desired. Let one plate of the glass be a little *longer* and *narrower* than the other, and one flat side of each be *ground roughly*—these will be readily appreciated in their use.

Now for the working of the contrivance: Having a crust of good and safe virus, as much of the scab as is likely to be used shortly is cut off with a knife, to be placed between the two rough surfaces of glass, and ground into a powder; then a few drops of water (q. s. to make a thin paste) is added, and the whole triturated between the glasses by moving the longer and narrower one over the other in a circular direction. When this is ready for use, the lancet comes next, and should be used as lightly as possible on the left arm of the subject, on the depression formed at the insertion of the deltoid muscle in the humerus. It should be so held and applied as to make a number of *rapid, light* cuts on a small spot until the blood begins to *show—not to flow.* Should bleeding occur, wait until it ceases before applying the virus paste, which should be dabbed on with the point of the finger and gently rubbed in. The abrasion of cuticle (which is all that is necessary) is much facilitated by holding the patient's arm with the left hand in such a way as to *stretch* the skin of the arm between the thumb and fingers. Where a number are to be vaccinated at once, it is much more expeditious to make the scratches on all before laying down the lancet, and then apply the virus to the arms in the same rotation. Young children are best vaccinated whilst asleep. If done with proper skill it does not awake them. When done with, the two plates should be laid together with the two ground surfaces in apposition, thus retaining between them the virus that is left, that none be lost; then they may be placed with the lancet in an ordinary card case and carried in the vest pocket. Virus thus carried may be moistened and used at pleasure.

Sometimes when we have a first-class subject, and want all the virus we can get out of it, two, three, and even seven punctured spots are made at once; usually three are best, and made in a perpendicular line, half an inch apart, or a little over.

When 7 are wanted, 3 of them are made in the line just described, and 4 more put in on the outside, so as to form a circle around the middle one of the 3, or a square with each other,—thus: —all half an inch or more apart. If put too close they will run into each other; if very wide apart, they will be larger than necessary. And it is a fact worth note, that where a number of pustules are formed, neither will be as large as a single one would have been, though in the *aggregate* considerably larger. It seems to be a law that the more pustules, the smaller they are; the fewer the larger, provided they are formed within a certain radius.

III. *Legislation.*—If there exists any in Virginia on the subject of vaccination, beyond the appointment of a State agent at a small salary, I do not know it. This agent, I suppose, is required by law to furnish all applicants with virus (such as he can get) at short notice, and from whence he may obtain it! The salary of the agent—which, I believe, is about $600—is not sufficient to enable him to give all his time to the cultivation, collection, and distribution of the virus. Hence, in case of a panic, he must often be put to all sorts of straits and expedients to supply the sudden demands made on him; or, failing to some extent, he is subjected to much undeserved censure. Cannot vaccine laws be so framed and carried out as to encourage the propagation of healthy virus by competent and conscientious men, enforce regular vaccination, and keep the people so well protected that a panic will have no room to breed? Unless this is done, a heavy responsibility rests on each individual member of our profession to do what in him lies to keep up a constant interchange of pure and reliable virus between each other and the State agent. It is obvious that if this were done, very few people would escape vaccination, and such sudden and heavy drafts on the agent would be unknown. Such interchanges of professional courtesies among physicians would greatly enhance their sociability and pleasure, and at the same time do a great public service.

ART V.—*A Case of Precocious Development in a Child, with Remarks.* By J. HUGGINS, M. D., Newbern, Ala.

In May 1874, a negro man, who passes under the singular and not very euphonious name of "Job Coffin," called upon me to visit his little daughter, Callie, who was suffering from teething, or rather those general derangements of the system which are incident to the period of dentition, such as fever, diarrhœa, swollen gums, &c. This condition readily yielded to appropriate treatment. At this visit the mother of the child called my attention to a very strange development of the genital organs and mammary glands. On inspection I found the two mammæ uncommonly large, being about two and a half inches in diameter, and projecting outwards about an inch. The nipples were correspondingly developed. The genital organs presented a more precocious development than the mammæ. The labia were unusually large and covered thickly with hair about an inch long. The mons veneris was also coated with hair, which was not so long as that on the labia.

This precocious development continued until the end of the year, or about six months, when it arrived at its maximum. The child was then not quite two years old. The two breasts were now about three inches in diameter and otherwise well developed. The hair about the pudenda was longer and more abundant. In a word, the parts were as well developed as they should have been in a girl of fifteen years.

About this time other singular phenomena were presented. About every four weeks the child complained of pains in the lower part of the abdomen, in the region of the ovary on the right side. On examination, I found considerable hardness and some enlargement in that portion of the abdomen. This hardness continued for several days and then gradually subsided, but never to its normal condition. Fully believing that menstruation was about to set in, I did nothing that would probably retard it, but on the contrary placed the child on bromide of potash and warm hip baths. This condition became more aggravated each month until paralysis of the right leg was the result and the child was unable to walk; I then placed her on iodide of potash internally and the tincture of iodine externally.

In a few days after commencing this treatment the menses came on, or at least a fluid similar to the menstrual flow ran out of the vagina and continued for about two weeks. In about a month the hardness and paralysis had almost disappeared, and the child was running about in apparent good health. The mammæ, too, I regret to say, were reduced to about one-fourth

their former size, and since then no material change has taken place in the case.

I will also state that this little girl is somewhat precocious in intellect as well as physique, and its mother (Susan) says "Callie has more sense than all my other children put together." In fact the expression of the child's face and the general contour of her features remind one more of a large sized girl than of a little child.

The parents of this child are perfect specimens of the black race, healthy, and have several other children besides the one herein mentioned.

Though having an extensive practice among negroes, this is the only case of the kind I have ever met with. I saw, several years ago, a very young female infant whose breasts were considerably enlarged, and contained in them a fluid resembling milk. Dr. Richard Inge, of Greensboro, Ala., informed me that he recently had a similar case in his practice. I understand there is a negro girl living about seven miles from me, whose pudenda have been covered with hair since infancy, but her breasts were never developed. Dr. Dunglison in his work on physiology, gives an account of a female whose menses came on when she was only one year of age, and who gave birth to a babe weighing 7¾ lbs. when she was only 10 years and 3 days old. Sir George Simpson, an English surgeon, also states that he saw in India "a woman only 12 years old who had already presented her husband three thriving pledges of connubial love." Mahomet, too, is said to have consummated his marriage with one of his wives at the age of eight years. In a table giving a list of 2,352 cases, by De Boismont, a French accoucheur, I find that, *one* case menstruated at the age of five, one at seven, two at eight, eleven at nine, and thirty-four at the age of ten years.

If then, the functional development in this little girl, Callie, was a natural one, as it appeared to be, the question that naturally suggests itself is this, would conception be possible in this child in case the seminal fluid was properly injected into the vagina or womb? The generally accepted theory of menstruation is, that it is a flow caused by a congested condition of nearly the whole generative apparatus which takes place during the process of ovulation; or, in other words, that it is the result

of, or a part of the ovulative process. The logical inference then would be that when a female menstruates she is capable of conception. Yet, Dr. Richie, of Glasgow, who has given much attention to the subject, holds a contrary view, and asserts that "ovulation takes place continually during the period of childhood," and that menstruation is not a necessary consequence.

It is not a part of my purpose to discuss the subject, but leave that to others more competent. I report this case not only on account of its anomalous characteristics, but with a hope that it may evoke other reports of similar cases which doubtless have presented themselves to other physicians throughout the South, and which I believe will be found far more prevalent in the negro than in the Caucasian race. I still entertain the belief, which I asserted in a previous report on a similar subject, that all *deformities*, *monstrosities* and anomalies which are met with in the human race, are found more frequently in the black than in the white.

In conclusion, I will state that I have exhibited this case to several of my professional friends; among the number are my partner, Dr. L. D. Webb, and Dr. E. L. McGehee, of New Orleans.

ART. VI.—*The Value of Medical Organizations* (Annual Address Delivered before the Nashville Medical Society, October 21st, 1875.) BY VAN S. LINDSLEY, M. D., President, and Professor Physiology, University of Nashville, and Vanderbilt University, etc. (Referred for publication in the *Virginia Medical Monthly.*)

Little more than a year has elapsed since a bare quorum met in this hall for the purpose of re-organizing and infusing new life and energy into the remains of the old Nashville Medical Society. From that small beginning large results have been accomplished; results of which none need be ashamed, but rather all have much cause for satisfaction and mutual congratulation. Meeting with much opposition and indifference, the pioneers in the cause of a medical society in Nashville took a bold stand, kept up a cheerful front, and by constant vigilance and untiring perseverance, have at last realized their fondest anticipations and most sanguine hopes. As Madame De Stael said, "there is

nothing so successful as success." So fellow members, we have done what we set out to do, and feel that proud consciousness and pleasing exhilaration which always follows in the wake of accomplished endeavor.

Pardon me for stopping a moment to thank the junior members of the profession for the zeal and interest which they took in this society movement, and with which they assisted in carrying it forward to its present prosperous condition. It is mainly through their constancy, perseverance, and contagious enthusiasm, that the society now rejoices in its new birth, has grown to full manhood, and bids defiance to all disappointed croakers and outside intermeddlers.

These last ill fated specimens of humanity may cry themselves hoarse with their drivelling and futile prophecies of decay and disruption; but we neither hear them nor heed them, but move onward, our faith and actions based on the broad ægis of American medicine, improving ourselves by mutual intercourse and interchange of ideas, filling our respective stations to the full measure of our ability, until we pass from the stage of action and give place to our successors.

It is not difficult to see the benefit derived from association and organization into a society. Many of us have felt it during the last year in our various meetings in the reception and giving of new ideas, in the development of kindly feeling and professional intercourse.

With the present organization of society, and its still further division into professions and associations, no one man, however great he may be individually, can set himself up as the embodiment of the concentrated quintessence of excellence of this particular age or race. These are times of associated movements, co-operative efforts, the blending of the many for the accomplishment of results for the benefit of the whole mass of the community. Medicine and its devotees have always kept time to the music of the age in which it flourished. And to-day we find it in the front rank of all progressive movements, willing to lend a helping hand, offering its means, and, what is dearer still, the lives of some of its brightest members in time of epidemic for the general weal.

While the above statement is true in regard to many parts of

the United States, we are sorry to confess, that Tennessee is far behind many of the sister states in that complete organization of State and county medical societies, which is so desirable and necessary to develop the medical interests and history of our State. What we are about to say might seem more appropriate as coming from the State society, but as Nashville is the central city of our beautiful State in point of geographical position, as well as from its wealth, intelligence, and magnificent educational institutions, so the Nashville Medical Society, from its very position and the character of its members, can exert a powerful influence upon the profession of our State, by arousing its enthusiasm, stimulating its latent energy, and fusing into harmonious and symmetrical shape its scattered and now inert elements.

We meet to-night as members of a local society, but next spring most if not all of us will meet as members of the State Society, and it will be well for us to think of this subject and determine to work actively for a better and livelier State organization, that we may assist in putting medicine on a better basis in Tennessee. With your permission, then, I will give a few points in reference to the *history of societies of other States*, to show how very far behind the medical profession of the State of Tennessee is, and how we, as a local society, may help to advance its interests.

States north and south of us have far outstripped us in this matter of medical organization; and the fruit of their labors shows itself in the benefits they have received, by mutual co-operation, in elevating the dignity of their State associations, in stimulating higher professional attainments, and in breaking down the barriers of professional jealousy and routine formalism.

New York boasts, and with pardonable pride, that out of 60 counties, there are 56 which enjoy the enlightening influences of a local county society in each, and that there are but 4 which still remain without the fold. The Medical Society of the State of New York was incorporated in 1806, by an act of the Legislature, providing also for the formation of societies in every county in the State. "The representation of the county societies in the State Society is established on the basis of the representation in the Lower House of the State Legislature. Each county medical society in good standing is now entitled to as

many delegates as its county is to assemblymen. In addition to this, each regular incorporated medical college in the State, can send one delegate, and the New York Academy of Medicine five. A full representation, from 128 assembly districts, 8 medical colleges, and the Academy of Medicine, would give the society 141 delegates. Delegates unless permanent members, are required to serve four years; otherwise they forfeit their eligibility to permanent membership. Besides the delegates from the county societies, there are 329 permanent members—two being elected each year from each of the eight senatorial districts, provided, the delegate has attended the meetings four years successively. They have a roll of 157 honorary members, embracing the names of some of the most distinguished gentlemen that ever graced the medical profession. The sum total of the three different sets of membership amounts to 627 members. The attendance at the first meeting in 1806, was 12; at the last 255. The average attendance for the past eight years, has been 214, thus showing a steady and rapid increase from the commencement of its career to the present time."

This is a proud history, and shows what steady, persevering effort will accomplish. The New York State Medical Society prints a handsome volume of Transactions yearly, containing valuable papers on various subjects, and which should be in the library of every physician.

If New York with her magnificent lakes, beautiful rivers, crisp climate, and go-a-headative doctors, does not arouse us to emulation, we have but to turn our eyes towards the Gulf; and Alabama, whose climate is more enervating than ours, whose population is sparser, and whose resources are much less, will present a picture of professional activity and thorough organization, which will make our own record look meagre, and unsatisfactory to the last degree. Be it said to the credit of our sister State south of us, that her medical profession, have united and perfected a State and local organization which reflect the highest honor and glory upon her doctors. Their State Society meetings are largely attended; able papers are presented and read; there is a catching enthusiasm which pervades their deliberations, and they annually publish a large volume of transactions.

A prominent physician from that State told me a few weeks

ago, that the doctors could carry any measure appertaining to medicine in their Legislature whenever they chose to exert their influence. I would like to see the day when we could make even a slight impression upon the stony and obdurate hearts of our Legislative Solons, and get some wholesome and necessary sanitary laws passed, of which we stand so much in need.

The more local societies we have, the more efficient will be our State Society; and the more active, energetic and progressive we make our societies, the greater will be their influence upon our communities, and the stronger will the medical profession be to effect proper legislation on subjects of State medicine which are now attracting so much attention.

Public hygiene is now taught in our medical schools as a part of the ordinary course; but of what avail can it be to any one, if the medical profession of each State has not influence enough with its own people and law-makers to have co-operative boards and State Boards to put into practice the latest hygienic developments?

Education, agriculture, law, physical science, all have their paid representatives in the beautiful capitol of our State, appointed either by the Legislature or the Governor, to look after the interests of their respective departments; but where is the representative of medicine—that science which has for its object the loftiest and most important interests of the community?

The answer is simple and plain. It is because our profession in Tennessee has laid dormant and inactive so long, that it is not known or recognized by politicians or law-makers as a factor of influence in the affairs of the State. But let us unite into societies and show that we are acting in concert throughout the State, and are determined that Tennessee medicine shall have its full share of influence in the management of the affairs of this Commonwealth, and politicians will no longer pass us by with vain hopes and unfulfilled promises. All that we ask is to have a voice in reference to those questions which are collateral to medicine and which tend to the development of the highest interests of the community in the shape of prevention and control of epidemics, proper sanitary laws and facilities for the registration of marriages, births and deaths.

The foregoing are not the only advantages accruing to us

from an organization into societies. In society we have the pleasure of meeting each other and discussing the wonderful developments in modern science and the near relations of these discoveries to the practice of medicine, and with your indulgence we will advert to some of them.

No doubt in the early history of medicine the imperfect generalizations of science when applied to practice often disappointed its ardent cultivators and caused their method of investigation to appear ludicrous failures. But the case is now different; art now waits on science.

And upon this idea of waiting for certain and exact rules—of doing nothing in practice, unless we can be guided by the unerring finger of science, which is steady, certain, and progressive, while art is vascillating, doubtful and limited—has grown up in France the expectant method of treating disease, and in Germany nihilism; in other words, that in disease it is better to trust the crippled efforts of nature than *doubtful* art. The grand old sage, Hippocrates, did not appreciate so fully as we do, the remarkable saying he uttered "Life is short and Art is long," when we reflect that the lapse of nearly twenty-five centuries has been too short to perfect that art, or even discover its key note, which he first placed on a rational basis.

Art, then, which is based on permanent laws, discovered by science, rests on a sure foundation and gives satisfactory results.

Euler gave to the optician, the principles of achromatism, without which the telescope and microscope would never have been perfected. To the scientific method of inquiry are we indebted for nearly every permanent advance made in each of the branches of knowledge, and where it has been followed closest, there we find the grandest results and deepest inroads through the stubbornly disputed dominions of ignorance and superstition.

We feel that we live in an age of wonderful mental activity and material change. The dreams of oriental fancy have become the sober facts of every-day-life, and the modern chemist is the magician who has broken the spell.

It seems characteristic of the present age to accomplish what has heretofore been classed among the unknownable. Only

fifty years ago Biot pronounced the construction of an achromatic microscope an insolvable problem. It required but a few years for science to detect his error, and to say we are in possession of an instrument, freed from confusions and illusions, which magnifies a thousand diameters—a million times in surface—without serious distortion or discoloration of its object. Compte, the great founder of the positive philosophy, says of the celestial bodies—"we can conceive of the possibility of determining their forms, distances, size, and movements; but we will never be able by *any means* to study their chemical composition, or mineralogical structure, and, by stronger reasoning, the nature of the organic bodies which live upon their surface." Could the doubter of human progress re-appear, he would stand aghast at the contradiction between his assertion and the revelations of the spectroscope, by which the power of the senses has been increased and the range of action extended. By aid of this instrument the chemist reaches out ninety-two millions of miles, questions the light of the sun, as it were, fills his bell glasses from its fiery atmosphere, and detects the vaporized metals, iron, iodine, lithium, and others floating around this great luminary. And to-day solar and planetary chemistry are accomplised facts. If the spectroscope can satisfy our curiosity through such infinite distances, it is equally effective at short range, and can detect the one hundred and eighty millionth part of a grain of sodium floating in the air, or the minutest presence of poison in a drop of human blood, though it may have been administered in the smallest of homœopathic doses. Thus we see this instrument combines the powers of the microscope and telescope, rivalling either in the range and minuteness of its searches, and becomes invaluable in the hands of the physician for toxicological purposes by the certainty with which it detects impurities in the blood.

In the language of an enthusiastic micrologist, the future of anatomy and physiology lies in the hands of the optician. Man, the central figure, now stands midway between two infinities, the infinitely great, and the infinitely small. With the telescope he can peer away yonder into the immensities of space, at the hazy nebulæ spanning the arc of night with its milky way, and define the contending atoms of matter at work in the formation and

evolution of new worlds to be fashioned into shape and hurled forth on their mission of ceaseless motion. Turning in the opposite direction with the microscope, he can look down into the tiniest workshops of protoplasmic force, and discern the established truth, that every organized structure is developed from a cell, itself evolved from a nucleus, which again is constituted by the aggregation of granules in the midst of a fluid.

To see a crystal form, a cell evolve or a stone fall, is to see the Infinite in action; we wonder, but know as little of the skill that guides the forces in these operations, as those who have gone before us. In studying the minute structures and their formation, we enter the laboratories of life, and if nature permits us to look on and see the process, she does not deign to tell us the why.

We see the busy little workman, the nucleated cell, surrounded by its plastic material, imbibing liquid through its walls, and giving out waste material by the same means. The chemist and microscopist putting their heads together, have demonstrated, that these little cells contain within their hollow spheres fatty substances, salts and liquid matter, as independent organic structures. Carrying their investigations into the field of the physiologist, they show that cell activity is not simple absorption, but that it is presided over by the unseen and unknown skill we call vital force; each cell having the power to select its contents from the plasma of the surrounding fluid, and the cells of each tissue having peculiar properties and functions, as different individuals and professions in the same community.

Following these investigations to their practical result, they tend to show, that the processes by which morbid growths take place are the same as those by which sound or healthy tissues are produced; some of these morbid productions, indeed, are in no way to be distinguished from areolar, fibrous, cartilaginous, and other natural structures, and doubtless have a similar mode of origin; others again so far as yet appears, are peculiar in structure and composition, but still their production is, with much probability, to be referred to the same general process.

Understanding the nature of morbid operations, directs us to a more rational treatment of their various forms, and in some cases to a prevention of occurrence altogether.

Physiology and minute anatomy are so interwoven and mutually dependent one upon the other, that they cannot be separated. In studying the function we must study the mechanism. But the cultivators of this science too long occupied themselves with inferring the function or use of organs from their construction—in other words, of viewing their branch from the stand point of the anatomist alone.

The more knowledge advances, the more plainly is it shown that there are physical and chemical processes upon which life depends. Heat is produced by combustion in the organism, as it is in the fire; starch is converted into sugar there as it is in the laboratory; urea which is so constant a product of the body's chemistry, can be formed artificially by the chemist; and the process of excitation in a nerve on the closure of a constant electric stream, appears to be analogous to the process of electrolysis in which hydrogen is given off at the negative pole.

The peculiarity of life is the complexity of combination in so small a space, the intimate operation of many simultaneously acting forces in the microcosm of the organic cell—the specialty of life is the maintenance of a certain definite plan; and accordingly Coleridge, following Schelling, defined life as the principle of individuation.

Given the different kinds of force and of matter, how, it is asked, is the pattern determined and worked out? As every individual is in life weaving out some pattern on the roaring loom of time, though what he weaves no weaver knows—so the lowest form of vitality manifests a definite energy, and is said to accomplish a definite plan. Your blood goes coursing along its vessels, and as it passes through the different structures, each tissue helps itself to the kind of material suited to the repair of its wasted energy with a precision almost amounting to intelligence.

If you were to ask me for an explanation of this kind of catalytic property which each structure seems to possess, so that from the same fluid, bone selects bone, muscle selects muscle, and so on through the whole list, I could no more explain it, than I can the fact why one grape sucks out of the ground the generous juice that Princes hoard in their cellars; and another the wine which it takes three men to drink—one to pour it

down, another to swallow it, and a third to hold him while it is going down.

Passing on to the functions of the nervous system, who would have ventured to predict some time since, that it would ever be possible, to measure the speed at which an impulse of the will travels along the nerves? This subject has been carefully studied by Tizeau, Marey, Donders and others. Different observers have estimated it at from forty to eighty or a hundred feet a second; so that in harpooning a whale, as the newspapers have it, it would require a second, more or less, for the whale to feel the stroke in the extremity of its tail. The brain takes one-tenth of a second to transmit an order to the muscles; and the muscles take one-hundredth of a second in getting into motion.

These few results show the rate of working of the different parts of the machinery of consciousness, and nothing would be better than to calculate the whole number of perceptions and ideas a man could have in the course of a life time.

The nerve cells of the brain vary in size from $\frac{3}{1000}$ to $\frac{3}{100}$ of an inch in diameter; and the surface of the convolutions is reckoned at about 670 square inches, which with a depth of one-fifth of an inch would give 134 cubic inches of cortical substance; and, if the cells average one thousandth of an inch, would allow room in the convolutions for 134,000,000 of cells. Dr. Hooke, the famous English mathematician and philosopher, made a calculation of the number of separate ideas the mind is capable of entertaining, and they amounted to the enormous sum of 3,155, 760,000. These figures as given by physiological researches show the wonderful capacity of the human brain, and reveal at least the materialb asis from which emanate the stupendous and multiplied results arrived at by some extraordinary minds.

I throw out these ideas in passing for what they are worth, hoping that they may do some good by way of encouragement to keep up our enthusiasm and interest in the good we have begun.

We truly believe that the Nashville Medical Society has a high and important work to perform; and to show that it is amply capable to do it, we have only to refer, and we do it with pride, to the record of her past history and more especially to the year which is just ended.

Fellow members, we have only to persevere in the course already commenced, until it will not be long ere it will be considered a privilege as well as an honor to be a member of this society. With prophetic eye, and at no distant period, we see this society enjoying its meetings in its own elegantly furnished rooms, surrounded with medical periodicals from all parts of the world, and the beginning of a library which will continue to grow in size and value through all succeeding generations. We see established through its influence a Medical Journal enriched by the productions of its own members and furnishing an *accessible* channel for the medical history and literature of Tennessee.

As life's unending column pours,
Two marshalled hosts are seen,
Two armies on the trampled shores
That death flows black between.

One marches to the drum-beat's roll,
The wide-mouthed clarion's bray,
And bears upon a crimson scroll,
"*Our glory is to slay.*"

One moves in silence by the stream,
With sad, yet watchful eyes,
Calm as the patient planet's gleam
That walks the clouded skies.

Along its front no sabres shine,
No blood-red pennons wave;
Its banner bears the *single line*,
"*Our duty is to save.*"

Clinical Reports.

Obscure Brain Trouble. F. T. Brooke, M. D., Cuckoo, Va.

On Thursday, March 25th, 1875, I was called to see Ralph N., a short, thick-set negro man, 68 or 70 years old. He had, until six weeks previously, always enjoyed excellent health. Is married, and the father of six healthy children.

I found him in bed, in a semi-comatose condition. He was easily aroused, however, and to questions put to him, answered intelligibly. Complained of intense pain in the occipital region. His skin was cold and clammy; pulse 96, and very weak; the right pupil considerably dilated, the left nearly normal—did not respond readily to light; breathing normal; heart rhythm quickened—the sounds being a little weakened; lungs healthy;

liver slightly enlarged; kidneys free from disease; no *paralysis* or *anæsthesia;* tongue coated; and there had been no action from the bowels since the 21st inst.; nor had he eaten anything of any consequence since that time.

I learned, on inquiring of his wife, the following additional facts: About six weeks before, while attending a funeral, without any premonition, he had fallen—"was not himself for a few seconds." He soon got up, complaining of a little dizziness, went home, slept well that night, and the next morning, after his usual breakfast, went to his work. His appetite continued good, and though he did not feel quite as well as he had done before his attack, he continued to work as usual up to about 11 o'clock on March 22d. At that time, being engaged with his wife in grubbing, he remarked to her that his head was paining him terribly, and that he felt weak. She advised him to go to the house, some half mile distant, which he did, without assistance. What occurred on his arrival there I could not learn, but in about an hour afterwards his daughter found him lying on the floor asleep. She aroused him; he got in bed and continued to grow worse up to the time of my arrival. During the day he would lie, as his wife said, "sleeping hard," "sometimes talking things she did not understand.," (delirious) and at night would be very restless, scarcely sleeping at all. When I called him, he knew me at once, but in a few seconds seemed to forget that I had spoken to him, or that he had seen me before for a long time.

Here, then, I recognized my mortal foe—some (to me) obscure disease of the brain. I had watched for three years a case somewhat similar, treated by that nestor in his profession, Dr. Hunter McGuire, and had seen it resist him, though he fought it inch by inch, till at last, after three years, nature had to give up the fight, though fortified and assisted by all that skill could do or science suggest. There was one brief interval, however, when science seemed to have gotten the better of the disease. Dr. McGuire ordered a strictly *milk* diet, and the change in the patient was wonderful for six weeks. Health seemed to have regained its throne, but the disease had collected too many forces, and soon resumed its sway; but it is clear to my mind that the ground gained in that short interval prolonged the pa-

tient's life many months. I need not say every remedy known to the profession had had its day, and all had failed most ignominiously. *Milk* alone had commanded any respect, and to milk I now determined to appeal.

I ordered Ralph to take at once four compound cathartic pills, and if there was no action at the end of six hours, to take two more; and as there was evidently a strong tendency to death by asthenia, I ordered in addition carb. ammonia ℈j, sulph. morph. gr. j, water f℥iv. S. Tablespoonful every 4 hours.

March 26.—The pills acted after he had taken six; passed a more quiet night; pulse 80; skin dry and warm; reaction had taken place; still semi-comatose, but when aroused complained of his head, though he said the pain was not so bad. Ordered a glass of milk every 3 hours, and at night bromide of potassium 20 grains, to be repeated every half hour till sleep is procured. An examination of his urine showed it to be high colored, with a gravity of 1014; a trace of albumen; quantity normal.

March 27.—Found the patient better; had slept once during the night, under the influence of forty grains of bromide of potassium; more easily aroused, though the urine contains rather more albumen. Milk to be continued, and, if possible, increased. Ordered a diaphoretic, and at night the bromide of potassium to be continued *pro re nata*; the bowels to be opened with cream of tartar and jalap.

March 28.—Pupils normal; pulse 76; skin good; urine without albumen. There is still a strong tendency to somnolence, and an inability to stand on his feet, though he can turn himself in bed, and all the movements of the limbs are performed perfectly. Bowels moved by an aperient.

From this date till *May* 1, he continued in bed, improving very slowly; his diet was chiefly milk, of which he has taken from a quart to three pints daily. After this he was able to get up and move about a little; continued to gain strength, and by *June* 20 was able to work in the field; but now there appeared a difficulty in his speech. Cannot articulate plainly, but otherwise very much improved.

September 7.—About the same; cannot stand the heat of the sun, but works in the morning and evening. Sight not at all impaired. I neglected to say that he at one time lost the power

of co-ordination to some extent, but at this time he is better of it, and the disease presents itself more in an inclination to sleep than any other way.

The history of this case, with its group of symptoms, appears to me entirely unique. It is evidently a disease of the brain; the tendency to death was by asthenia, as shown by the cold, clammy skin, the weak pulse and quickened heart. The comatose condition continuing so long, we would expect paralysis in some form as a sequence.

I cannot help attributing to the *milk* a powerful agency in retarding the progress of the disease; and if I can bring any one of the profession to try the plan, and if, by its adoption, one single individual, being hurried to his grave, is respited an hour, I shall feel that these lines have not been penned in vain.

The habits of this old man have always been temperate as regards liquor; but for many years he has been easily excited by any religious commotion, The headache was constant for several days, and confined in its intensity to the occiput, though he complained of general uneasiness throughout the whole head. The difficulty in speech seems to be in consequence of a paralysis of the organs of phonation, and I think he could write his ideas if he knew how to write; hence it is not a case of amnesia. The effect of pressure upon the jugular or carotids was not noticed.

October 9.—Since the cool weather set in, he says he feels rather stronger; and he has gained some flesh, I think.

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*Vicarious Menstruation per Rectum.** By E. C. BARRETT, M. D., Jerusalem, Va.

I was called in 1868 to Miss A., of my county, age about 17 years, whom I found to be suffering from an attack of bilious remittent fever. After going through the usual routine of examination, I found that my patient had habitually been the subject of a vicarious discharge of blood from the bowels in the place of the regular monthly catamenia, a peculiarity that had come upon

*The report of this very interesting and rare case was submitted to the late session of the *Medical Society of Virginia*. The Committee on Publications referred it back to the author, with the recommendation that he should offer it for publication in some medical journal. The author has kindly furnished it to the *Monthly*.—ED.

her about two years previous—or, in other words, about the time of puberty. She had never menstruated before this discharge made its appearance; neither has she since. I had known her long before I was called to see her professionally, and, from her seeming perfection of development, with a remarkable voluptuousness of physique, all coupled with the gayest and most cheerful temperament, I had no reason to suspect that anything abnormal existed to prejudice the perfect performance of any of her vital functions. From the history of the case, as gleaned from the young lady herself, as well as from the testimony of a trusty and intelligent aunt, I found that this discharge was as regular and as uniform as "clock-work" in coming on once in every twenty-eight days, and lasting for a period of three to four days.

I did not know whether the difficulty originated from an absence of uterus, or from atresia vaginæ, or from recto-vaginal fistula, which possibly might permit the secretion to take the wrong direction in its exit. Expecting to be married, and appreciating the possibility that her condition might preclude its propriety, she consulted my opinion in the premises. After satisfying her that, in order for me to arrive at a proper conclusion, it was necessary that I should make a vaginal examination, she submitted. Accordingly, in the presence of one of her female relatives, I resorted to the touch; and after examining all the parts in my reach, and finding nothing abnormal as regards construction or relative position—not even the nervous system indicating anything foreign to its good order and healthy regularity—I told her I saw no reason why she should withhold herself from the enjoyment of her desired conjugal relations.

Soon after this interview she was married and entered upon the theatre of her domestic reign. In a few months afterwards she experienced a suspension of her "courses," and hence became alarmed lest it was the harbinger of some great evil, and sent again for me. After observing that her abdomen was enlarged, and that she had every indication of a pregnant woman, I pronounced her *enciente*. The birth of a fine, well-developed boy child about three months afterwards proved the correctness of my diagnosis.

I attended her through the period of her confinement, and

from the beginning of her lying-in to her getting up there was nothing which was not in perfect keeping with the usual laws of all healthy child-bearing women. The uterus passed through the various changes incident to child-bearing, and the mother herself furnished to her child all the elements of a healthy nutrition.

In the course of fifteen months, after lactation had failed to exercise its counteracting influences over the uterine functions, the vicarious discharge made its appearance again and continued with its former periodicity and regularity till its cessation announced a recurrence of pregnancy. And thus she has gone on, alternating as above described, till she has now been the mother of three children.

As there was no obstruction to the escape of the child in labor, and the subsequent secretions of the womb; and as there was nothing in the bowels calculated to detract the energies of the system from the performance of its natural functions, I am at a loss for a rational hypothesis as to the cause of such a phenomenon as has been mentioned.

I had no facilities by chemical analysis, neither had I the benefit of the microscope by which to detect, if any, the distinguishing elements of this discharge from that of an uncomplicated monthly catamenia. Hence, I merely submit the facts of the case as known to me.

A Case of Post Partum Hemorrhage. By C. A. Bryce, M. D., Richmond, Va.

About the middle of April, 1874, I was called to see a patient that I had been attending for a week or ten days before with typhoid pneumonia. She had been very much prostrated by her attack, and I had her at that time upon beef tea, milk toddy, &c. Upon my arrival, she told me that she felt something coming down into her vagina; she stated that she was about four months advanced in pregnancy. Introducing my hand into the vagina, I felt the head of the fœtus which was entirely through the os. It seemed to be merely laying there and not influenced by any uterine contraction; the woman had had no pains what-

ever. I drew the child out without the slightest resistance; and passing my hand into the womb, which was in a complete state of inertia, and without any tendency to contract, I felt the placenta adherent. Under the circumstances I was glad that it had not become detached. I gave her fluid extract of ergot every fifteen minutes, and kneaded the uterus through the abdominal walls. After continuing this for an hour, I observed that she was bleeding from the vagina, and an examination found the placenta partly separated from the uterine walls; I then determined to peel off the placenta, and hoped that the stimulus of the hand in the womb and the combined action of the ergot would bring on contraction. After removing the placenta, the womb failed to respond, and the only way that I could restrain the hemorrhage was to keep one hand doubled in the womb, pressing firmly on the placental site, while the other hand grasped the uterus externally. In this way I kept her from bleeding to death, until my friend, Dr. O. A. Crenshaw arrived.

Seeing that there was no contraction whatever, and that whenever I removed my hand the blood would gush, he suggested that we should inject the womb with a solution of persulphate of iron. We accordingly got some *pure Monsel's solution*, and injected about three ounces into the uterine cavity. The bleeding was almost instantly arrested, and in a little while the uterus contracted firmly.

Our patient was extremely prostrated and I had but little hope of her recovery, as this was an additional source of danger to her while she was still down with the pneumonia. She was stimulated well and cream toddy ordered for her, to be given every half hour. Valentine's preparation of meat juice was given—a bottle full every 24 hours. Under this treatment she rallied very fast and recovered without any untoward symptoms.

I have mentioned this case to show that while, in post partum hemorrhage, to bring on uterine contraction is the proper practice, we may arrest hemorrhage of this kind *completely*, in persons of a feeble circulation, where there is general relaxation and inertia, *without* having any contraction whatever by local styptics.

Proceedings of Societies.

RICHMOND ACADEMY OF MEDICINE.

October 21.—Dr. R. T. Coleman remarked upon the use of **Sponge Tents to Relieve the Contraction of Phimosis.** In a case under his care, he inserted a tent between the prepuce and glans, and in two days the foreskin could be easily retracted.

Erysipelas.—Dr. J. B. McCaw reported a fatal case in a previously healthy though delicate girl of 10 years, brought on by boring the ears for rings. Gold wire hooks were inserted after the boring. The left ear healed properly, but the right became erysipelatous in two or three days. The erysipelas extended over the face, down the nares and pharynx, and thence into the stomach and intestines, as tracked by the signs and symptoms. No treatment availed.

Dr. O. Fairfax reported a case analogous to Dr. McCaw's, though his patient recovered.

Dr. Parker added his testimony in favor of muriated tincture of iron, and when this fails, the subcarbonate.

Dr. F. D. Cunningham remarked that a good prognostic indication in erysipelas is the occurrence of urate of ammonia in large quantities in the urine, which usually precedes convalescence by about 24 hours.

Dr. W. W. Parker had recently used the

Elastic Ligature to Remove a Tumor extending from the eye down to the neck, and from the mouth to the ear. The woman, aged 19, first had a "mole," which became enlarged and ulcerated, and was removed with the knife, but the tumor returned. It came off within 3 weeks after the ligature was applied. There is some exfoliation of bone; and the aperture in the cheek is surrounded with healthy granulations.

Dr. Edwards alluded to a case of cancerous breast he had seen successfully removed by the elastic ligature by Dr. J. S. D. Cullen, at the City Alms-house.

Dr. M. L. James incidentally remarked upon a case of cancerous breast that had been removed by the knife eight or ten times. Since his last operation, some years ago, there has been no return of the tumor.

Extra Uterine Pregnancy.—Dr. Hunter McGuire reported the following remarkable case: A lady, aged 33 years; married in 1867; in 1868 gave birth to a child. In 1869, she thought she was again pregnant from the recurrence of the usual signs, but she did not feel quickening. In 1870, she menstruated, and the tumor commenced to subside. Her general health, however, was very bad. In about 8 or 9 months more, the tumor became very

hard, and appeared to recede towards the spine, thus making her abdomen less prominent. This state of affairs continued until the latter part of 1874, when she became pregnant, and in July, 1875, gave birth to a full term healthy child. During this last pregnancy, her abdomen was unusually distended, owing to the old tumor, but her health became pretty good notwithstanding. She got up in ten days after confinement, and in two or three weeks was walking about. Then she was taken with severe pain in the abdomen. Afterwards an abscess developed, and discharged through the vagina about a pint of pus and some fœtal bones.

The patient came (from West Virginia) into Dr. McGuire's hands about Sept. 15th. There was considerable gastric and intestinal disturbance. The pulse was weak and very rapid, and her condition was altogether miserable. On vaginal examination, a very fetid discharge occurred through a fistula, which commenced on the vaginal margin of the cervix uteri, and ran up into the cyst. The probe passed through this fistula very readily, and detected bone. It was also evident from manual examination that the cyst was attached to the anterior abdominal wall, and the cranial bones could be felt through it. The patient was put on treatment to improve her general health preparatory to the operation. On October 4th, finding that longer delay was impolitic, Dr. McGuire (after the patient was chloroformed) made an incision of about two inches in length through the linea alba into the cyst. Within the cyst were found the remains of a nine months fœtus in a state of decomposition, with exception, of course, of the bones. However, there was some flesh, and the brain, also, was in pretty good condition. The placenta (after removal of the *debris* by small forceps and the fingers) was found rolled up on the right side of the cyst, and closely adherent thereto; this was not removed, in accordance with advice of the best authorities on the subject. The cyst itself was deep, and was composed of spongy tissue. Indeed, it was so soft that the operator's finger penetrated it on very slight pressure, and entered the peritoneal cavity; through this opening, before its closure by sutures, the omentum could be seen. The external wound was partially closed; a roll of oakum was put into the cavity, and drawn through the external opening to secure drainage. The cyst contracted rapidly—a weak carbolic acid solution being daily injected into the cavity. During the operation, a *very* small amount of blood was lost. The patient's condition was greatly improved, though there was great weakness of the digestive apparatus, as before the operation, so that only milk and whiskey could be retained.

On the 6th, she took a little bread and milk; but in five hours afterwards she vomited the bread undigested. The surface soon afterwards became cold and clammy, and the pulse very rapid and weak. At night, and even next morning, she was apparently moribund, but at the time of this report she appears to be doing as well as she was two days ago.

[In a few days after this report, the patient relapsed; and there was complete want of assimiliation of food, which could not be remedied by any treatment. She soon became moribund again; and as transfusion alone promised any hope, that was practised, but failed in effect; she died about a week after the major operation.]

November 4.—Dr. J. S. Wellford reported a **Case of Cerebro-Spinal Meningitis,** in which the first symptom observed was pain in the left shoulder, lasting four or five days.

Dr. Wellford also reported a case of

Convulsions, probably due to spinal irritation caused by a menstrual attempt. The lady, married, aged 22 years, healthy, though of nervous disposition, has two children—the youngest 7 months old. She was first seized with abdominal cramp-like pain, and was treated without effect with calomel and opium. The convulsions, however, yielded to the almost constant use of chloroform and chloral—℥xvij of chloroform being used in four days and nights. A digital vaginal examination a day or two ago showed the existence of a slight menstrual flow, but this discharge has now ceased, and the parts are hot and tumid. She is still under treatment.

Dr. W. W. Parker had encountered a somewhat analogous case as to the abdominal pain, though the lady had no convulsion. A varied treatment was employed without much benefit. Seven months afterwards, she gave birth to a full term child.

Dr. H. H. Levy reported the case of a young man who had run a splinter under the thumb-nail into the matrix, and who had convulsions within six hours thereafter. He was chloroformed, and an incision made down to the splinter, which was removed, giving some immediate relief. There was, however, a marked tendency to tetanus. There was severe pain running up the whole arm, and across the upper chest and back, while there was a spot of marked tenderness near the second dorsal vertebra. There was no actual trismus save during the convulsion. A solution of atropia, and afterwards of extract of belladonna to the finger, and the internal use of morphia, chloral and bromide of potassium, and two drops of croton oil constituted the treatment. Within 24 hours the patient was doing well, and in good spirits.

The subject of **Bilious Fever** was discussed by Drs. Watkins,

Joynes, Upshur, Macgill, Parker and Wellford—all agreeing as to the comparative rarity of the disease at present, which seems attributable to the prompt use of quinia in all malarial troubles.

November 18.—Dr. R. T. Coleman reported a case of

Jaundice in Pregnancy, occurring during the latter half of the seventh month. The lady was a primapara, and had a natural labor at full term. He reported the case because the patient recovered. In his experience, jaundice occurring shortly before accouchment had usually proved fatal. After the labor, calomel, combined with extract of taraxicum, was given at night, and a saline aperient on the next morning. Nitro-muriatic acid and pepsin were given in an infusion of prunus Virginiana; the body was also sponged with nitro-muriatic acid.

Dr. Edwards had recently attended a lady in confinement who had jaundice for a month or more before labor; but there was never a symptom in her case which awakened alarm. The jaundice passed off about a week after confinement; treatment mercurial. The infant, however, otherwise apparently healthy, was much more than ordinarily jaundiced, and died about ten days after its birth with head symptoms.

Monstrosity by Inclusion.—Dr. M. M. Walker reported the following case: Last spring he was called upon by a young gentleman who had noticed a slight muco-purulent stain upon his shirt, and complained of an annoying sensation at a point about an inch and a half behind the anus. On examination, the Doctor found two or three small depressions behind the anus, like small-pox pits; but finding no other cause for the irritation, he dismissed the case. Recently the patient returned, having noticed some pus which had been discharged from a fistula at the seat of one of the "pits." The probe was passed about two inches into the fistula, which was found to be closed at its upper limit near the coccyx; there was no evidence whatever that there had ever been any communication whatever with the rectum. Dr. W. opened the fistula with a bistoury, guided on a grooved director, but saw nothing along the course of the wound worthy of mention. The fistulous track was touched with nitrate of silver, and poultices were ordered to be applied. After two or three days, Dr. W. noticed a black looking substance protruding from the wound, which, on being pulled out, proved to be a bundle of light-brown, downy hairs—about the size of an ordinary "lock of hair"—discolored at one point by the nitrate of silver. Nothing in the history of the case gave any ground for the belief that these hairs had entered from the rectum, while there was no doubt that they had occupied their position as a fœtal development. Acting as a foreign body, however, and the

part being, perhaps, irritated by sitting down or something of the kind, an abscess had been caused which sought to empty itself at the points indicated. The patient had felt some "uneasiness" about the locality for the previous two years. The wound of incision healed kindly.

Drs. Fairfax, Coleman and Joynes remarked upon the occurrence of monstrosities by inclusion, the theories of their development, etc. Velpeau's well known brilliant diagnosis of "monstrosity by inclusion," in the case of the boy with swelled testicle, was mentioned by Dr. Joynes. Velpeau's diagnosis was founded upon the protrusion of hairs from the tumor.

Dr. J. D. Moncure reported a case of **Ovariotomy,** which will be given in a future issue.

Dr. Hunter McGuire stated that a few weeks since he was called to a healthy child, about 4 years old, who, while romping about the nursery, fell, when the parents discovered that the child had partially lost the use of one lower extremity, which he diagnosed as a case of **Infantile Paralysis.** That night the paralysis disappeared, but returned the next day, and regularly thereafter twice a day, though at no special hours. Each attack, consisting chiefly of loss of power of co-ordination, lasted only for an hour or two. In a week or so, however, the paralysis became permanent, and so continues up to the present date. There was no loss of sensation in the limb, nor has there been at any time any general fever, which fact, indeed, more than any other, leads Dr. McG. to report the case. But the thermometer indicated at first a temperature slightly higher of the ham of the affected side than of the healthy side. Recently, the temperature of the affected limb has been a little lower than on the other side. At first he thought the case probably due to intestinal irritation; hence he resorted to purgatives and anthelmintics, but without benefit. He then used spinal counter-irritants and quinia, but likewise without effect. Afterwards cod liver oil and iodide of potassium were given, but no improvement was manifest. Dr. McG. now proposes to employ friction, passive motion and galvanism. He remarked upon the want of accurate pathological research on the subject, and the variety of treatments adopted by various authors, &c.

Dr. Coleman said he had met with infantile paralysis mostly in robust children, and chiefly as the result of cold—as sitting upon cold stone door sills. The initiative fever, lasting about ten days, might easily be confounded with intermittent fever. The prognosis as to ultimate recovery is in accordance with the amount of paralysis *after* the lapse of three or four weeks. In one of his cases, complete recovery occurred in six weeks. In

another, there had been fair improvement in six months, but there is still some limp in the walk, and the affected limb is smaller than the other, though it has now begun to develop *pari passu*. In a third case, it was a month before the child could move about, but has steadily improved during the last two and a half years. During the first or febrile stage, Dr. Coleman uses mercury, quinia, and spinal counter-irritants of iodine, and then applies belladonna liniment. In the second stage, he relies on iron, strychnia and dilute phosphoric acid, and employs friction, salt-water baths and galvanism. He objects to the too early or prolonged use of mechanical supports. The object of treatment should be to develop the muscles by use.

Dr. Parker's experience does not lead him to be at all sanguine in his prognosis in cases of infantile paralysis.

December 2.—**Apomorphia.**—Dr. E. T. Robinson reported the case of a child, 3 years old, who had swallowed a small tin whistle, but which lodged low down in the œsophagus instead of entering the stomach, as shown by the fact that bread and water when swallowed were instantly rejected without any of the natural contents of the stomach. Impressed by his recent readings regarding the emetic effect of apomorphia, he determined, in consultation with Dr. Watkins, to resort to it instead of to surgical means, to which the mother objected if such could be avoided. Accordingly one-fourth of a grain was hypodermically used, and in three minutes there was nausea, and in two more minutes copious emesis of stomach mucus, &c., took place, bringing the whistle along with the ejected matter. The child slept for an hour and a half afterwards, but this sleep was rather the result of the relaxation from the fright occasioned by the accident than of the apomorphia. The child awoke refreshed, lively, and without nausea.

Dr. Watkins added that there was no pallor, nor any of the depressing effects usually following the use of ipecac.

Drs. Joynes and Wellford made some remarks concerning the drug, based upon their readings on the subject.

Dr. J. N. Upshur reported a case in which some of the effects of the use of **Ergot similated those of Belladonna.** To a lady with menorrhagia, who was unusually susceptible to the influence of all drugs, he had given 20 drops of Squibb's fluid extract of ergot, procured from a reliable druggist, and believed to be pure. The train of symptoms was exhilaration of spirits, slight numbness of the surface, dryness of the throat, flushed face, and the pulse ran up to 100. Each subsequent dose produced the same symptoms, which lasted about half an hour after each administration.

Alarming Effects from Chloroform—Resuscitation.—Dr. Parker stated that a few days ago he was called upon to remove an exostosis from the matrix of the great toe of a middle-aged lady of tolerably fair health. The patient was unusually long in being anæsthetized. He administered the chloroform by inhalation from a towel for about 15 minutes, and then Dr. Fairfax administered it for 10 minutes more. About 6 or 8 minutes after Dr. F. had taken the towel, Dr. P. began to operate, but the patient flinched so much that he had to desist—notwithstanding the fact that she appeared to be anæsthetized, though there was no stertorous respiration. In a moment or two more, however, he readily removed the growth with a cartilage knife. But just as he finished, Dr. F. remarked that he could not feel the pulse, which seemed to stop suddenly. The patient's face was extremely pale; there was a rapidly increasing dark discoloration around the eyes, and the lips were blue, and respiration ceased. Quick as thought, Dr. P. elevated the lower extremities, after the method recommended by Nélaton, Sims, and others. In half a minute color returned to the face, the pulse beats began again, and respiration was restored. In about a minute more the patient was replaced on the table, with head lowered, &c.; but it was more than an hour before consciousness was restored. Dr. Parker usually gives a drink of whiskey before beginning the administration of chloroform, but in the case of this patient she would not take much. Though he has administered chloroform and seen it administered several thousand times, this is the first case in which he has ever seen it produce an alarming symptom when properly administered.

Dr. Wellford called attention to the statement of Anstie that the ano-genital region and the matrix of the great toe are the last parts to become anæsthetized, and that a larger percentage of evil effects follow the use of chloroform when operations are being performed on these regions than on any other parts of the body.

Dr. Joynes called on Dr. J. B. McCaw to state his experience with **Chloral-Hydrate.** Dr. McCaw replied that he had nothing specially to state, though he thought it probable that he used it more frequently and freely than other physicians in the city. The principal objections in his experience to its continued use were that it almost invariably—sooner or later—produced congestion and inflammation of the mucous membranes, causing, in the order of frequency he had observed, conjunctivitis, vaginitis, sore mouth, gastric irritation and diarrhœa. In acute insanity and in many forms of convulsions it is an incomparable remedy. He is sure he has saved several of his patients from the necessity

of being sent to lunatic asylums by the timely use of chloral. Also in cases of cholera infantum, when there have been three or four large stools in rapid succession, and when the child begins to give that peculiar scream or cry which is the almost sure precursor of convulsions, from which but few, if any, recover, there is nothing known to the Doctor which can take the place of chloral, given in commanding doses, to quiet completely the nervous irritability.

Dr. Parker detailed a case of fatal poisoning by chloral in a young woman convalescing from the opium and whiskey habits, who had been taking 30-grain doses at night, upon his prescription. On one occasion, however, upon *her* own prescription and without the knowledge of her attendants until too late, she took 90 grains at one dose, and died in the course of an hour or so. But when properly used, he considers chloral an invaluable remedy. He endorsed what Dr. McCaw had said about it in cholera infantum. (See August No., 1875, page 350.)

Dr. L. S. Joynes stated that two or three years ago, in treating a case of delirium tremens, he gave 160 grains in 24 hours, afterwards alternating opium with chloral. The patient recovered from the delirium tremens satisfactorily, but an indistinct articulation of words remained for some time afterwards. A relative of the patient told Dr. J. that she had known of a young lady living up the country similarly affected after taking chloral.

Dr. F. B. Watkins related the case of a young man with delirium tremens, to whom 50 grains of chloral had been given by enema, with nearly fatal result. In one or two minutes after the Doctor had given the injection, the patient, previously wide awake, was fast asleep. In a minute or so more he had a convulsion, and the surface became livid. The tongue was pulled out and artificial respiration was resorted to. The bad symptoms were relieved, but the patient continued sleeping. He remained motionless in a very awkward position for a couple of hours, when profuse perspiration bathed the whole body. Twenty-five grains were afterwards given by the mouth. The next morning he was up, ate a hearty breakfast, and went to work feeling "quite himself again." The Doctor also recalled the case of poisoning by chloral reported on page 303, vol I., of this journal.

Dr. F. D. Cunningham always administers the first dose of chloral with some doubt as to how it is going to act. He is satisfied that it kills much more frequently than morphine. His experience and observation, though he had never had a fatal result, had cautioned him not to use chloral in alcoholism, or wherever the tendency to death is by paralysis of the heart. In infantile and other convulsions, however, it is invaluable.

Dr. J. D. Moncure had used chloral, combined with bromide of potassium, with the best effect in acute insanity. In operations upon habitual drunkards, he administers chloral by enema before chloroformization. Sudden deaths of habitual drunkards without the use of chloral is not uncommon. He recently had such a case, and has seen several others.

Dr. O. A. Crenshaw thinks that chloral is dangerous in delirium tremens. In addition to the effects noted by Dr. McCaw, he had several times seen peeling off of the ends of the finger nails. He does not think the long-continued use of chloral advisable.

Dr. Coleman remarked that when there is anæmia of the brain, we should beware of chloral. In doubtful cases, give it with some stimulant. He thinks it murder to give it to an old toper, unless combined with some stimulant. But in acute mania, mania â potu, etc., it acts well. He does not give it to persons with loose, flabby fibre.

MEDICAL AND SURGICAL SOCIETY OF BALTIMORE.

(Reported by G. L. Wilkins, M. D.)

Oct. 21st.—**Gun-shot Wounds.**—Dr. T. B. Evans related the case of an insane man who, in attempting self-destruction, shot himself twice, one ball entering the chest at the left nipple, the other about one inch below. Both balls passed directly through the chest and lodged beneath the skin over the scapula, from whence they were extracted. Air passed out of the orifices of entrance with each inspiration. Three days after the shooting, the patient had slight hæmoptysis, but now (about two weeks afterwards) he is convalescing. There was no effort made to close either the orifices of entrance or exit.

Dr. Tiffany said that, according to the U. S. Army Reports, a certain number of cases were treated as simple incised wounds, and that the fatality was far greater than when an opposite course was pursued.

Oct. 29th.—**Suppression of the Urine from the Presence of a Calculus in the Left Kidney.**(?)—Dr. Arnold related the following case: A robust German woman was seized with pain in the left lumbar and hypogastric region, giddiness and vomiting. He had attended her in four or five previous attacks, due to the passage of renal calculi, which resulted in speedy recovery. In this attack he gave hypodermic injections of morphine; but she did not recover as usual, and he was troubled to know the cause. She still complained of giddiness, headache, nausea, and at times vomiting. He began to suspect uræmic poisoning, and accordingly directed his attention to the state of the urine, when he

found that no urine had been passed for two days. A catheter was introduced, and the bladder was empty. At this time she complained of no pain, except hemicrania, dimness of vision, tremor, and occasional convulsive movements. Later at night coma vigil took place, followed by epileptiform convulsions, and death resulted. There was no *post mortem*, but he is of the opinion that a renal calculus had blocked up the pelvis of the left kidney (probably both), and that the other became affected sympathetically. He has never seen a similar case.

Dr. Tiffany said that this case finds its parallel in two similar cases reported by Dr. Jenner, of England. In two fatal cases of suppression of the urine, calculi were found in only one kidney of each case. Both subjects were males, and had been in full health up to the time of attack.

Dr. Arnold said that one case of the kind has been reported in a Prague medical journal, but, on *post mortem*, the other kidney showed a diseased condition.

Eczema.—Dr. Cathell called attention to two cases in which fatal head trouble supervened upon the spontaneous recession of chronic eczematous eruptions. Whether the recession was consequent upon the irritation being first set up within, or whether the inflammation was directly due to the disappearance of the eczema, he was not prepared to state.

Double Hydrocele.—Dr. Cathell also called attention to a case of double hydrocele, evidently due to an intense and prolonged venereal excitement. A moral and chaste gentleman, after being strongly tempted by a woman of loose character, was seized with pains in the testicles, followed by the effusion.

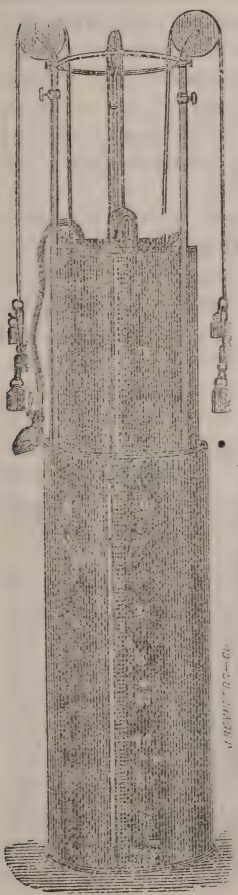
Analyses, Selections, &c.

Pneumatic Treatment of Diseases of Respiration and Circulation is the subject of a paper of much practical value (*Med. Record*, Aug. 28) by Dr. A. Rose, New York. The method was introduced principally by Hauke, of Vienna (1870), and Waldenburg, of Berlin (1871), though two years before Hauke's publication, Dr. Lewee's, St. Petersburg, practised the method successfully with an apparatus not inferior to those of later make.

Waldenburg (1871) and Riegel (1873) showed the diagnostic and therapeutic importance of observing the distinct acts of respiration in lung troubles—whether dyspnœa depends upon imperfect inspiration or expiration, or both. In emphysema, for instance, expiration only is imperfect, indeed, the inspirative force is often greater than normal; in phthisis, primarily and principally inspiration, and later expiration, is imperfect; in

stenoses of the respiratory ducts inspiration is imperfect, while expiration is intact; in catarrh of the small bronchi, expiration is imperfect, inspiration normal (Waldenburg); pneumonia and pleuritis affect respiration like phthisis.

Hauke invented (1870) a portable apparatus for condensing or rarefying air to be used in treating either of these conditions; several of these instruments (imported by Otto & Reynders), were used by German physicians in New York. Hauke recommended in emphysema, expiration into rarefied air; in croup, inspiration of condensed air. Though most successful in emphysema, he soon dropped his treatment for croup. Later, he recommended inspiration of condensed air as a prophylactic for consumption. Other Vienna practitioners confirmed this recommendation.



But Hauke's apparatus was insufficien in power, and inconstant in effect. Wald enburg overcame these imperfections, and after experiments with his improved instrument, he arrived at a conviction even stronger than his predecessors as to the value of the plan of treatment. The principal parts of Waldenburg's apparatus, (fig. 1) are two spirometer-like sheet zinc cylinders, fitting one into the other—the outer, 1 metre high and 30 cm in diameter. The outer one is filled to a mark with water, as in the spirometer. The cover of the inner cylinder has an opening for a manometer, and one for a flexible tube passing to an ori-nasal mask. If the inner cylinder, resting upon the bottom of the outer cylinder, with the stopcock closed, is raised and held by weights, the contained air is rarefied; if this cylinder receives air at atmospheric pressure, and the stopcock is then closed, the cylinder being made to descend by weights, the air in it is condensed. According to the capacity of the lungs, 5—30 inhalations empty a fully charged apparatus.

In using condensed air, Waldenburg generally commences with 20 lbs. weight $=\frac{1}{59}$ of an atmosphere (an addition to the atmospheric pressure of 15 lbs. to the square inch), advancing by and by to 40

lbs.,$=\frac{1}{2}\frac{1}{9}$ atmosphere, seldom to 60 lbs.,$=\frac{1}{1}\frac{1}{9}$ of the atmospheric pressure. Dr. Langman (New York), used this instrument last year with favorable results.

When Waldenburg first reported his treatment of pulmonary diseases, he had treated 14 cases of emphysema, and 4 of phthisis. The emphysematous patients were invariably directed to expire into rarefied air, but to inhale condensed air whenever dyspnœa occurred. The other patients generally inhaled condensed air.

In all four cases of phthisis, increase of vital capacity, and respiratory power of the lungs resulted; three perceived alleviation in breathing, sometimes for an hour or longer period; consequently general improvement was felt. One had suffered for two years with chronic hemoptysis, which was treated with diverse remedies in vain. Waldenburg had the patient (comparatively quite strong, but very dyspnoic) inspire condensed air. After a few sittings, bloodspitting became less frequent, and did not recur for three weeks, while during two years it had scarcely paused longer than eight days. However, a relapse occurred, and although an interruption in the bleeding followed after a few days, it returned and persisted as before.

According to Waldenburg, a curative effect against the paralytic conformation of the thorax may be anticipated. A case of catarrh in the upper part of the lungs was treated with perfect success. Experiments in inspiring rarefied air have shown that it is the most effectual gymnastic exercise for the thorax, and therefore, is recommended to persons inclined to phthisis. Furthermore, atalectasis (especially due to pleuritis and paracentecis thoracis), asphyxia, and stenosis of the bronchi call for treatment by the new method. Waldenburg, in his conclusions, says: "*Inspiration of condensed air, as well as expiration into rarefied air, increase permanently the vital capacity of the lungs* (as shown by spirometry), *and the power of inspiration and expiration as measurable by the pneumatometer.*"

J. Sommerbrodt, Breslau, published (1874), some extraordinary results in treating lung disease by Waldenburg's apparatus. He thus treated in four months more than 60 patients. He found the limits beyond which no effect could be produced, in so far that in two cases of very extensive emphysema he could influence the catarrh beneficially, but the emphysema only very slightly; furthermore in a case of emphysema of ten years' standing, every attempt failed to reinstate expirative power. However, in more than 50 cases of not so long standing, the most diverse in character, partial recovery always resulted, and in most cases, was complete.

Waldenburg also made the important discovery, that the therapeutic effects of condensed and rarefied air upon the organs of circulation are equally as exact, constant, and useful as upon those of respiration. The blood pressure must be decidedly modified as soon as the air pressure in the lungs is changed by the inspiration of or expiration in rarefied or condensed air, as shown by J. Müller, Ed. Weber, and Donders.

In inspiration of condensed air the pressure in the lungs, which in normal inspiration is remarkably negative, is notably increased. The heart and large vessels are lightened the more the density increases, so that when the air is sufficiently condensed the lungs press upon the thoracic circulatory organs; hence increased arterial pressure and flow of blood, checked flow from the veins into the right heart, increased quantity of blood in the greater circulation, decreased quantity in the lesser circulation; frequency of pulsation is generally distinctly decreased. Expiration in condensed air of low density has a similar effect as inspiration of condensed air of high density.

Inspiration of rarefied air diminishes arterial pressure and the flow of blood; pulse loses tension; the entire arterial tube appears smaller; the lessened pressure in a very expanded thorax aspires the blood with greater force into the right heart; the greater circulation is relieved of blood, and the thoracic organs, especially the lesser circulation, are abnormally charged with blood. If the air is but slightly rarefied, the pulse will be moderately accelerated.

Expiration into rarefied air acts upon the circulation like inspiration of rarefied air, but in much less degree.

Indications for condensed air present when it is desirable to increase the power of heart tension; and accordingly arterial pressure, to increase the quantity of blood in the greater circulation, and to relieve the lesser circulation, especially diseases of the heart in which the flow of blood from the lungs or from the left ventricle is checked, as in stenosis or mitral and aortic insufficiency, chronic inflammatory processes in the lungs, bronchial catarrh of severe form.

Indications for rarefied air present when arterial pressure is to be decreased, the volume of blood in the greater circulation to be diminished, and the quantity in the thoracic organs to be increased, as in affections of the right heart.

Condensed air is especially *contra-indicated* in abnormalities of the walls of the vessels (atherosis) and disposition to hemorrhage.

By the sphygmograph Hænisch demonstrated graphically the effects of the pneumatic apparatus upon the heart and vessels

described by Waldenburg. In healthy persons as in those with heart diseases, inhalation of condensed air elevates the systolic pulse curve; lessens the dicrotic curve. After expiration into rarefied air, the systolic elevation is less marked, and the dicrotic curve is relatively more marked and higher. Gradually increasing changes of pulse curves in this direction were proven on patients with heart disease after continued use of the apparatus thus shown graphically, and also by the disappearance of the other signs of the disturbance of the compensation. In a case of mitral insufficiency and stenosis, the curves of systolic elevation appeared distinctly more prominent under the influence of inhalation after 14 days than before the first inhalation; the dicrotism was much less marked; also during treatment, bronchial catarrh, cyanosis, and shortness of breath disappeared, and the quantity of urine increased; and symptoms of the interruption of compensation considerably improved.

Gerhardt recommends, to promote expiration in emphysema, instead of expiration into rarefied air, assisting expiration by pressing the hand on the breast and abdominal walls. He thus treated two cases daily 2 or 3 times (20–30 respirations) in both, the vital lung capacity increased. Disagreeable consequences were slight bronchial hemorrhage, and in one, convulsions of the muscles of the face.

Berkart, London, next to Hauke and Waldenburg, made a contrivance to produce rarefaction of air during expiration.

Von Cube contrived an improvement on Hauke's invention.

A very superior apparatus was constructed by Ph. Biedert, sast. surg. Hessian Infantry, in Worms. At the meeting of the Society of German physicians at which Dr. Langman's paper was read, Mr. John Reynders (of J. Reynders & Co.) exhibited this apparatus which he had imported at Dr. Rose's request, and which Dr. R. had used himself. In constructing his apparatus, Biedert availed himself of the principle of the bellows as applied in the accordeon, similar to, but independent of Fränkel's invention.

The patient can inhale condensed air from the partially filled bellows, and after turning the apparatus exhale directly into rarefied air.

The pneumatic method has been used with good results by Von Cube (Mentone), and Domanski (Krakau, Poland) in applying medicines to the deeper air-vessels by means of condensed air. They recommend this treatment, for instance, in phthisis in the later stage, when the bronchorrhœa is copious, and the inner surface of the lung is ulcerous. For introducing medicines into the lungs, Domanski causes the condensed air leaving the

apparatus to pass through a vessel in which the medicated vapor for inhalation is produced. Fill the inner cylinder of Waldenburg's apparatus with atmospheric air, and without removing the weights connect the rubber tube with a glass tube, reaching almost to the bottom of a Wolff's bottle. In this bottle, for enlarging the volatilizing surface, is some cotton impregnated with the volatile medicine. In the second neck, a short glass tube is connected by a rubber tube with the mask and stopcock. If weights are laid on the inner cylinder, and if the stopcock at the mask is now opened, air will pass from the cylinder into the Wolff's bottle, and enters the lungs. After inhalation, the stopcock is closed, the patient expires into the open air, and repeats the operation. The medicines used are ol. terebinth. ol. pini, creosot., and acid. carbolic.

When Von Cube desires to affect one lung only, the patient inhales, half inclined upon one side, with a hard cushion placed under the loin. The air entering the lung overcomes the resistance of that part of the thorax more readily which does not sustain the weight of the body.

The non plus ultra of simplicity and cheapness is the *new* contrivance of B. Fränkel (Berlin). The annexed cut shows it as used. It consists of the bellows of an accordeon. On one side a metal tube is inserted, 2 cm. in diameter, which carries the mouthpiece. Fränkel recommends the sitting position for using the apparatus. If the bellows is expanded by drawing the accordeon apart, the air in it will be rarefied, and *vice versa*. If the patient applies his mouth to the cushion, the effect of the rarefaction or condensation of the air will communicate itself to the intra-thoracic air. The apparatus is without valves, as it is easy to apply or withdraw the mouth at the right moment. All varieties of effects with Biedert's apparatus can be produced with Fränkel's by the patient himself. On the margin of the apparatus is a centrimetrical measure, which indicates by how many centimetres the wooden disks are separated or brought together. The expansion of the apparatus of one cm., according to the measure affixed, would



MORTUARY STATISTICS OF SOUTHERN CITIES FOR SEPTEMBER AND OCTOBER, 1875.

Norfolk.—By an oversight on our part, we failed to note in July that Dr. Whitehead had been re-elected Health Officer on expiration of Dr. Wilson's term.

Lynchburg.—"You will observe the large number of negroes that die of diseases 'unknown'; they die almost invariably without calling in medical aid. They are becoming more and more worthless every day."

Mobile.—With the September report, Dr. Bizzell remarks regarding yellow fever: "There have been in all about 12 or 15 cases. The disease has shown no tendency to spread, though it has existed here for 3 weeks. Strict quarantine is still kept up." With the October report (Nov. 16) he writes: "Not a single case of small pox or yellow fever in the city. All quarantine has been removed. *** Acute affections of the nervous system seem to be on increase."

Petersburg.—Dr. Claiborne sends reports for the two months ending October 23.

(Compiled from Reports of the several City Boards of Health.)

Cities	RICHMOND, VA.				NORFOLK, VA.				LYNCHB'G, VA.				MOBILE, ALA.				SELMA, ALA.				PETERSB'G, VA.			
Health Officers, ...Doctors	J. G. Cabell.				J. B. Whitehead.				W. H. Dulaney.				W. D. Bizzell.				John P. Furniss.				J. H. Claiborne.			
Population	Census Feb., 1874, though estimated at 65,000.				Estimated.				Estimated.				Census 1870. In addition 1,200 Creoles are estimated				Estimated.				Census 1873.			
	White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
	33,452		27,213		12,500		9,500		7,000		7,000		18,115		13,919		3,500		4,000		8,744		10,185	
Sex	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Number of deaths	56	58	66	82	22	22	22	21	5	11	18	14	35	48	36	52	2	4	3	4	22	16	30	36
Number still-born in addition	4		20		Color not given, 5				3		2		2		14		1		1		Color not given, 7			
Ages unknown not calculated. Under 1 year	24		41		5		18		5		15		8		17		1		...		Color not given, 23			
" 3 years	15		37		8		5		...		4		10		12		...		...		" "	16		
" 10 "	4		7		7		3		...		5		7		11		1		2		" "	19		
" 20 "	4		7		...		3		...		1		8		10		...		...		" "	2		
" 30 "	9		13		6		1		4		7		10		10		2		1		" "	5		
" 40 "	10		10		5		3		...		2		10		8		...		2		" "	5		
" 50 "	8		9		4		1		1		2		7		5		...		...		" "	7		
" 60 "	19		6		2		2		1		2		6		3		...		...		" "	6		
" 70 "	9		7		2		2		2		2		7		4		2		2		" "	4		
" 80 "	6		5		2		...		1		3		10		3		....		...		" "	3		
" 90 "	2		2		3		1		1		...		...		4		...		...		" "	2		
" 100 "	1		1		...		...		...		...		...		...		...		...			..		
Over 100 "	...		...		...		...		...		..		....		...		...		...			...		

CAUSES OF DEATH.

Abscess	1	.....	2	.....	.....	.....	1	.....	.....	.....	1	.....		
Accidents, Suicides, Wounds, &c	4	5	.....	.....	.....	.....	1	1	.....	1	.....	4		
Alcoholism, Delirium Tremens, &c	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....		
Aneurism	.....	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....		
Apoplexy (1 spinal in Mobile)	6	1	.....	1	.....	.....	1	2	.....	.....	.....	.....		
Asthma	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....		
Birth, Premature, Cyanosis	.....	2	2	3	2	1	2	3	.....	.....	.....	.....		
Brain, Conges., Inflam., Softening	3	1	.....	.....	1	.....	3	1	.....	.....	.....	1		
Bright's Disease	.....	1	1	1	.....	.....	1	.....	.....	.....	.....	.....		
Bronchitis	.....	1	.....	1	.....	.....	.....	2	.....	.....	.....	.....		
Cancer	3	.....	1	.....	.....	.....	2	1	1	.....	.....	.....		
Caries and Spondylitis	1	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....		
Cholera Infantum	12	13	2	2	1	2	.....	.....	.....	.....	3	1		
Cholera Morbus	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....		
Congestion Bowels, Brain, Lungs	.....	.....	.....	.....	2	1	10	6	.....	.....	1	.....		
Consumption	17	14	5	4	3	6	9	11	1	2	8	9		
Convulsions	5	7	1	1	1	2	3	7	.....	.....	2	1		
Croup	4	6	2	1	.....	.....	.....	.....	.....	.....	.....	.....		
Cystitis	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....		
Diarrhœa, Dysent'y, Enteritis, Gastritis	9	11	3	5	2	2	3	3	1	1	8	13		
Diphtheria	2	1	2	1	.....	.....	.....	.....	2	.....	.....	.....		
Dropsy, Ascites, Hydrothorax, &c	2	4	.....	.....	1	.....	2	2	.....	1	.....	.....		
Erysipelas	1	.....	.....	.....	.....	1	...	.....	.....	.....	2	.....		
Fever—Hemorrhagic malarial	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....		
" Malarial	.....	.....	1	4	.....	.....	9	5	.....	.....	2	1		
" Puerperal	.....	.....	.....	.....	.....	.....	2	1	.....	.....	.....	.....		
" Typhoid	7	8	.....	.....	.....	.....	.....	.....	.....	.....	1	.....		
" Yellow	.....	.....	.....	.....	.....	.....	7	.....	.....	.....	.....	.....		
Heart Diseases, Syncope	2	8	2	2	.....	1	6	.....	.....	1	1	.....		
Hemorrhage, Umbilical	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....		
Inanition, Marasmus, Old Age, &c	6	8	5	8	1	2	4	11	.....	.....	3	6		
Intestinal Obstruction	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....		
Ischuria, Jaundice	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
Leakæmia	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....		
Liver Diseases	.....	.....	2	1	.....	.....	1	.....	.....	.....	.....	.....		
Meningitis and Cerebro-Spin. Mening.	1	3	1	.....	1	.....	2	.....	.....	.....	1	.....		
Paralysis, General	2	1	1	.....	.....	2	.....	2	.....	.....	.....	1		
Purpura Hemorrhagica	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....		
Pyæmia, Septicæmia, &c	1	.....	.....	.....	1	.....	1	1	.....	.....	.....	.....		
Pneumonia	1	3	2	4	1	.....	1	1	.....	1	.....	2		
Rheumatism	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	.....		
Scrofula and Tabes Mesenterica	1	1	.....	.....	.....	.....	1	1	.....	.....	1	.....		
Small pox	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....		
Syphilis	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
Teething	.....	5	.....	3	.....	.....	.....	1	.....	.....	3	1		
Thrash	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1		
Trismus Nascentium	2	6	.....	.....	.....	.....	1	4	1	.....	1	1		
Unknown and Ill-defined	13	30	1	.....	.....	23	1	4	.....	.....	2	9		
Uterus, Rupture of	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
Whooping Cough	.....	.....	.....	.....	1	1	.....	.....	.....	.....	.....	.....		

correspond with 510 cm. of volume. Fränkel considers the attachment of the dynamometer unnecessary.

The air from this apparatus is more completely perceived by the lungs, with less modification of its original pressure than by any previous invention, due to the shortness of the breathing tube. All excess of action is avoided as it is worked by manual force only. Fränkel found that, with his greatest efforts, he could not condense the air above $\frac{1}{18}$ of an atmosphere, nor the power of suction above $\frac{1}{20}$ atmosphere. The advantages of the apparatus are that it is portable and applicable anywhere (for inducing respiration in chloroform asphyxia, of new-born, poisoning by oxide of carbon, etc.) Dr. R. thinks Biedert's apparatus will be used more especially in physician's offices, and Fränkel's by patients at their residences.

Editorial.

Death of Dr. John P. Mettauer.—It becomes our sad duty to record the death of another of Virginia's great men—Dr. J. P. Mettauer. He died of some renal disease at his residence at Worsham (the old Court House of Prince Edward County), Va., on November 22, 1875, in the 88th year of his life. He entered upon the practice of his profession when about 21 years of age, and continued constantly at his post until a few days of his death, when seized by the fatal attack of disease—all the while enjoying a large and lucrative practice. During his long life of active labor, he won for himself at home and abroad an enviable reputation. Indeed, no southern surgeon was more widely known. Many of his contributions to medical journals have become authoritative papers. But want of space curtails our notice; no doubt a full record will appear in the next report of the Necrological Committee of the Medical Society of Virginia, of which Society he was an Honorary Member. We can only add our full endorsation of the statement made in the Richmond *Dispatch*, that "he was a man of scrupulous integrity, high tone, much culture and great gravity and dignity of manner."

Book Notices and much other matter prepared for this issue are crowded out. In this connection we must ask friends favoring us with contributions, to condense their remarks within the smallest possible compass—always, however, taking as much space as may be necessary to give perfect expression to their peculiar views.

Atlanta Mortuary Reports have not been received for past three months.

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Original Communications.

Art. I.—*A Review of Progress in Therapeutics during* 1874.*

By Mary Putnam Jacobi, M. D., New York City.

(Concluded from page 633.)

Experiments upon *caffeine* (*Archiv für Pharmakol.*) have shown that it exerts on the frog a tetanic action quite analogous to that of strychnia. In the rana esculenta, the tetanus is followed by a rigidity resembling cadaveric rigidity. In another species of frog, however, there is no tetanus, but extensive muscular rigidity. In the experiments of the Edinburgh Committee on *Antagonism*, &c., the properties of caffeine are also investigated, and compared with those of *theine* and *cocaine*. The action of the three is said to be identical, and is described in detail for cocaine. This is found to be a powerful poison, affecting the entire nervous system, the respiration and circulation. After small doses, were observed: 1st, cerebral excitement; and 2d, a partial loss of sensibility. With larger doses, sensibility was completely paralyzed, and tetanic spasms and convulsions occurred, ushering in death. It was inferred from analysis of the phenomena observed that the posterior roots and gray columns of the spinal cord were paralyzed, while the anterior columns, and the nerves and muscles remained intact. The spasms were always spontaneous—not reflex as in strychnia poisoning. Motor paralysis of the limbs supervened, but was ascribed to the paralysis of sensibility, because muscular contractions could always be excited when electricity was applied to the brain, anterior col-

*The portion of the Report here presented considers principally *Caffeine, Theine, Cocaine—Their Antagonism to Morphine; Eserine; Antagonism of Atropine and Hydrocyanic Acid; Atropine in Sweating—in Ecophthalmic Goitre, in Salivation; Calabar Bean in Tetanus, in General Paralysis; Quinine; Salicylic Acid; Salicine; Carbolic Acid; Eucalyptus; Arsenic; Mercury; Ipecac; Emetine; Tartar-emetic; Apomorphine; Jaborandi; and Therapeutical Literature.*

umns of the cord, or motor nerves. The respiration was at first accelerated, then impeded, finally arrested; and the alterations of the pulse followed a similar course. The small blood vessels were at first contracted, then dilated and paralyzed. After death the skin, brain and viscera were all found congested. The temperature was at first slightly lowered, then increased. The pupil was contracted. The experiments were made upon frogs, mice, cats and rabbits. A fatal dose of caffeine for cats was six grains; of theine, somewhat less.

The *antagonism between theine or caffeine and morphine* was tested upon cats. It was shown that morphine was fatal in doses $1\frac{1}{2}$ to $1\frac{3}{4}$ grains. Then in three cases where $1\frac{7}{8}$ grains were given, recovery occurred if 4 or 5 grains of theine were administered in time; but with more than 5 grains of theine, the animal died. The same preservative influence was exerted by 4 grains of caffeine.

The antagonistic action of atropine was tested in regard to calabar bean and morphine. The minimum fatal dose of calabar bean was $\frac{3}{4}$ of a grain for a rabbit weighing three pounds; of atropine, 20 to 21 grains. After the simultaneous administration of poisonous doses of the two drugs, life was prolonged, in one case, five days. Atropine given *after* poisonous doses of morphine prolonged, but did not save life.

The same question has been studied by Martin D'Amourette (Abstract in *Gaz. des Höp.*, Sept. 26, and Oct. 3, 1874). *Eserine* was used instead of the bean. To it is attributed the same dual action which the author long ago ascribed to strychnia, namely: that, in small doses, it paralyzes the extremities of motor nerves, while in large doses it increases the irritability of muscles, and the excito-motor force of the spinal cord. Complete motor paralysis is the total phenomenon that precedes the convulsive asphyxia caused by irritation of the spinal centres. On account of this antagonism between the effect of small and large doses, it is possible to give a considerable quantity of eserine without producing convulsions or causing death, if the whole amount be divided into sufficiently small doses. The paralysis of the extremities of the nerves antagonizes the irritation of the nerve centres. Atropine can determine no other antagonism. It also, in non-toxic doses, causes a certain paresis of the motor nerves analogous to that

produced by small doses of eserine. These small nervo-paralytic doses may therefore be given to antagonize the irritation caused by toxic doses of eserine. But if medium doses of both poisons be administered simultaneously, the nervo-paralysis resulting from each is doubled, and death occurs by paretic asphyxia. If, on the other hand, toxic doses of both be given, the convulsions that would be produced by one are intensified, and death, again, occurs from convulsive asphyxia.

These conclusions are not encouraging for the attempt to utilize atropine in the treatment of calabar-bean poisoning. In regard to atropine and morphine, however, the experiments partially confirm the reputation of antagonism. Ten grains of morphine—the fatal dose—were given to 21 dogs, and followed by $1\frac{3}{4}$ grains of atropine; 6 of the 21 recovered. The authors ascribe whatever of beneficial influence is exerted by atropine to its property of contracting blood vessels, and thus averting congestion. When the atropine was given before the morphine, there were 7 recoveries out of 11 cases. The morphine, however, proved to be no antidote against poisonous doses of atropine—not even subduing the accelerated action of the heart. Morphine and atropine together *increase* the tendency to death. The Committee concluded finally that the antagonism between the two poisons existed only within a limited area; and that on human beings, the certain danger of atropine outweighed its possible advantages.

Boehm (*Arch. f. Pharmakol.*, 17 April, 1874) has repeated the experiments of Preyer on the *antagonism of atropine and hydrocyanic acid.* He finds that atropine is powerless over a fatal dose of the acid. But it is difficult to see upon what theoretical grounds atropine should be expected to antagonize the action of prussic acid.

The use of *atropine in hectic sweating* that has become rapidly generalized, was principally brought into notice in 1874. In the *Lancet* (July 25), 16 cases are related, of which 4 were permanently cured; but in 4 others, the sweating returned when the medicine was discontinued. At first, $\frac{1}{80}$th grain was given, and increased to $\frac{1}{60}$th, then to $\frac{1}{50}$th of a grain—the latter being the maximum dose. An article in *Virchow's Archives* (Bd. lviii, 1873) gives the results of experiments upon 75 patients affected

with sweating from various diseases. Of 15 cases of cheesy pneumonia, 6 were cured and 7 ameliorated; of 48 cases of phthisis, 22 were cured and 21 ameliorated; of 8 cases of rheumatism, 5 were cured, 2 ameliorated; and in 2 cases of trichinosis, the sweating was arrested. The atropine was given in pills made up with extract of gentian. It is supposed to act by contracting and restoring the tone of the blood vessels of the sudoriparous glands.

A similar effect upon vascular tonicity is to be inferred in two cases of exophthalmic goitre reported to the *Lancet*, where the exophthalmus and palpitations were both relieved by 5-drop doses of the tincture of belladonna.

We have finally to quote a case of excessive salivation successfully treated by atropine (*Berlin Klin. Wochen.*, June 28, 1873; *Am. Jour. Med. Sci.*, Jan., 1874). After an attack of apoplexy, a patient was affected with left hemiplegia and with salivation to the extent of a pint in 24 hours. Subcutaneous injection was made over the sub-maxillary gland of $\frac{1}{44}$th of a grain of atropine. The secretion of saliva ceased in 7 minutes, not to return for 14 hours. This fact is merely the therapeutical application of an experiment made long ago by Heidenhain, who ascribed the result to paralysis of the chorda tympani. It is well known that electrical irritation of this nerve causes an abundant secretion of thin saliva. From the history of the case we may perhaps infer that the cerebral extremity of its fibres, mounting to the brain in the facial, was irritated in consequence of the cerebral hemorrhage, and that the flow of saliva resulted from this irritation. This hypothesis would explain the beneficial influence of atropine, but at the same time leaves no reason to hope anything from it in cases of salivation depending on other causes, as vaso-motor paralysis, or elimination of some poison from the blood.

The theory of Martin D'Amourette in regard to the double action of *calabar bean*, deserves to be remembered when this poison is employed in the treatment of tetanus. A most singular case is reported by Sidney Ringer in the *Practitioner* (Nov., 1874). For two days the disease was mild and very irregular in its march. During this time the patient received 20 grains of the extract of calabar bean. On the evening of the third day violent generalized tetanus came on, with threatening of asphyxia. One-

third of a grain of the extract was given every 15 minutes, or 40 grains in 20 hours, of which 30 in the last 10; after that 20 grains were given in 8 hours, and convulsions entirely ceased. On this the fourth day, the patient became dangerously paralyzed for about three-quarters of an hour, but recovered, and suffered from no further convulsions. One hundred and forty grains of calabar bean were consumed in 86 hours, of which 88 grains were taken in 32 hours. This enormous quantity illustrates the remark we have quoted from Martin D'Amourette, concerning the tolerance for the poison that may be established by the administration of small doses frequently repeated. According to the theory, the peripheric motor paralysis produced by them should have rendered impossible the convulsions that had been caused by the bulbo-spinal irritation of the disease, and also those which the remedy itself must have tended to excite.

Mr. Crichton Browne (*Brit. Med. Jour.*, 1874, p. 522) has used calabar bean in two cases of that hitherto hopeless disease, general paralysis. The first, a man of 40, had ambitious delirium and commencing paralysis. Doses of $\frac{1}{4}$ grain of calabar bean extract were given for a month, without effect. The dose was then increased to $\frac{1}{3}$ of a grain, and croton oil applied to the head. Improvement was perceived at the end of a month, and the patient is said to have completely recovered eight months later. The second case was a woman, aged 37, in whom the disease had been creeping on for 12 months, and for whom was prognosticated certain death a year later. Oxide of zinc was given for 4 months, during which the paralysis only increased. Then the bean was administered in doses of $\frac{1}{4}$ grain. During 3 months the patient improved, but then had an attack of hemiplegia. The treatment was interrupted for a fortnight, then resumed, and in a year the patient had entirely recovered from the paralysis, while the intellect, though somewhat childish, was quite rational. The utility of calabar bean in this dreadful disease, if confirmed, would be difficult to explain. Eserine is known to dilate the blood vessels of the retina and iris, and in peri-encephalitis the blood vessels of the pia mater are already excessively dilated. But in tic douloureux, a spasmodic contraction of the vessels supplying the nerve at its root has been assumed, and the dilating effect of eserine sought for its relief

(*Brit. Med. Jour.*, p. 549, 1874). Eleven cases were treated by Menerve in the West Indies. Of these 5 were idiopathic, 1 reflex from uterine pain, 1 from anæmia, 1 from obstruction of the nasal duct, 1 from want of sleep, 1 accompanied by syphilitic paralysis of the third nerve; one case finally was very chronic. This one alone failed of relief; all the others, affirms the author, were cured. The eserine was administered by means of gelatine squares inserted under the eyelid.

Experiments, physiological and therapeutical, upon so long-established a remedy as *quinine* continue to be as abundant as those upon medicines more recently introduced into practice. A memoir by Jerusalimsky has just appeared at Berlin, criticizing the most recent experiments upon the physiological action of quinine, and controlling them by new. The most important conclusion of this memoir relates to the effect of quinine on the pulse, since it contradicts those of most other observers, especially the clinicians. In 6 experiments upon dogs, the subcutaneous injection of quinine in doses of from $\frac{1}{2}$ grain to 10 grains was followed in all cases by acceleration of the pulse. Repetitions of the dose at half hour's interval quickened the pulse still more. The pulse fell only under the influence of toxic doses—20 to 25 grains—which, when administered about an hour and a half after the first small dose had been given, and twice repeated, caused fatal collapse. It is very clear, however, that during the time allotted to the experiment the amount of quinine that would pass into the blood even after two or three subcutaneous injections of doses of $\frac{1}{2}$ grain to 5 grains, would remain below the dose which is universally admitted to accelerate the pulse. Whenever the author employed sedative doses he obtained a vascular sedation—indeed, so profound as to result in fatal collapse. The contradiction, therefore, to previous data exists rather in the author's mind than in his experiments, when these are properly interpreted. It is well known, moreover, since Briquet, that the depressing effect of quinine on the pulse is marked in proportion to its previous acceleration; hence, very much less noticeable in health than in disease.

Other physiological experiments are those of Hammond, who claims to have produced cerebral hyperæmia by subcutaneous injection of 10 grains of quinine. This is to be proved by the

rise of fluid in the stem of a cephalhæmometer inserted in an opening of the skull. It is not said, but it is to be presumed, that the dura mater was also divided; for it is certain that if the instrument rests upon this membrane it will be unaffected by changes in the cerebral circulation. When it does mark such changes, however, it is important to distinguish between an increase of pressure due to increase in the general vascular tension, and that which would result from an increased mass of blood in the cranial cavity.

I would notice that the subcutaneous injection of such a substance as quinine, especially if in acid solution, cannot be relied upon to produce instantaneously an effect proportioned to the entire dose, for the reason that absorption is by no means instantaneous. Its rapidity varies according to the degree of local irritation that will have been caused by the injection, and which, as I have assured myself, is sometimes sufficient to arrest absorption altogether. Again, in dogs, unless the injection be made very deep—preferably into the substance of the gastrocnemius muscle, as suggested by Claude Bernard—the solution is liable to spread between the skin and loose subcutaneous tissue, without penetrating more deeply. The skin afterwards sloughs. It is in order to avoid such irritation that Dr. Lente associates carbolic acid with quinine, in the proportion of ℥v to f℥j of an aqueous solution containing 50 grains of the bisulphate of quinia and ℥ 100 of dilute sulphuric acid. He claims to have made 150 successful experiments, and to have met with only 2 cases of inflammation (*N. Y. Med. Jour.*, March, 1874). These results have been violently contradicted by the experiments of others, and the question is still in active litigation.

In this connection, it is interesting to recall the advice given by Bernard, in his lectures already quoted, to inject quinine into the trachea. He quotes two cases where this was done in the algid stage of violent pernicious fever. In the first case, quinine administered by the mouth had been vomited; in the second, the patient, a child of 12 years, was almost unconscious; a ten per cent. solution of muriate of quinine was thrown into the trachea by means of a hypodermic syringe, without causing either cough or local irritation. In the first case, the pulse became perceptible 18 minutes after the injection, and in half an

hour heat was restored, and the patient out of danger. In the second case, in five minutes after the injection the pulse rose from 31 to 40 in 12 minutes; the respiration revived, and in an hour consciousness was fully restored; the patient sat up and asked for food. These observations were first published in a thesis in 1868, but Bernard's endorsement will give them more publicity. This distinguished physiologist declares that the method of administering medicines by the stomach, although far the most common, is the most uncertain and inefficacious of all modes of providing for absorption, and should be replaced by others whenever possible.

On the same principle as the hypodermic injections into the trachea, and far less dangerous, are the inhalations of quinine practised for pneumonia by Gerhardt (*Deutsch. Zeitsch. f. Pract. Med.*, *Centralblatt*, Mai 23, 1874); a half per cent. solution of the muriate was used, and 8 inhalations made in the course of 3 hours. During the next 36 hours the temperature fell 1.54 degrees to 3 degrees.

The effect of quinine upon lowering the temperature is still the subject of ardent investigations. New attempts are made to explain this antipyretic action as the result of diminished tissue metamorphosis. Kerner (*Pflug. Archiv*, Bd. III, s 109) asserts that after a 30-grain dose of quinine the amount of urea eliminated in 24 hours fell from 18 to 14 grammes. On the other hand, —— (*Archiv f. Pharm.* Bd. II, Heft 5) found that when quinine lowered the temperature of healthy rabbits, the exhalation of carbonic acid was not diminished; and in fevered rabbits this exhalation was even increased. But not enough facts have been brought forward to prove any important influence of quinine upon tissue changes, and the conclusions of Jerusalimsky in the memoir quoted still seem the most valid, namely: that quinine acts upon the temperature by stimulating the heat-regulating centre in the medulla. After section of the cord below this centre, quinine has no influence upon the temperature.

Binz, in a new memoir published in the course of this year (1875), reaffirms the parallelism between the antipyretic and antiseptic action of quinine, and the dependence of the former upon the latter. But clinicians continue to deny that the therapeutical effects of quinine can be explained by its action on

white corpuscles or on microzymes. Professor Sée, in a clinical lecture that has been extensively quoted, insists that quinine cannot be given in sufficiently large doses to destroy infusoria in the living blood (*Am. Jour. Med. Sci.*, Oct., 1874). Nevertheless, every theory admits that it may check septic changes (*Practitioner*, Nov., 1874). Accordingly, in observations on puerperal fever, Breisky has found that out of 54 cases treated by quinine 47 recovered (*Mem. Bern.*, 1875); of these 30 were without local lesions. But from a case of septic fever continuing three weeks after small pox, Clifford Albutt infers that quinine may flatten fever curves almost to a normal temperature without being useful as an antiseptic. His patients died of exhaustion without fever.

The unquestionable and remarkable influence of quinine over white corpuscles, when directly brought into contact with them, has been utilized in the topical treatment of suppurations. Morlard, of St. Louis, (*Pract.*, Nov., 1874) injected 6 grains of quinine, dissolved in 2–3 oz. of water, into the cavity of a suppurating pleura. The discharge of pus rapidly diminished, as it had not done under carbolic acid treatment. An ulcer on the leg, of two years' standing, and associated with initial heart disease, was treated with an ointment of quinine, 10 grains to the ounce. In two to three days, suppuration diminished, then healthy granulations appeared, and the ulcer was rapidly healed. The third experiment, equally successful, was on a mammary abscess, treated by an injection of 10 grains quinine to f℥j of water.

The treatment of whooping cough by quinine has been tried by Rapmund, in France (*Bull. Therap.*, Juni 30, 1874) upon 34 cases. He found that the disease was never shortened, but the number and violence of the paroxysms was lessened. Instead of administering the medicine hourly, however, it was only given twice a day.

The latest alleged property of quinine—namely, its effect as an oxytocic—is disputed by Weatherly (*Richmond and Louisville Med. Jour.*, January, 1875). He relates 5 cases where large doses were administered for intermittent fever, to women in various stages of pregnancy, without producing even a threatening of abortion.

Such cases, however, prove nothing in regard to the action of quinine upon a uterus whose contractility was already excited, and where parturition or abortion had already begun.

Salicylic acid has recently been proclaimed to be powerfully analogous to quinine, both as an antiseptic and as an antipyretic remedy. This new agent is fully described in Dr. Squibb's paper published in the *Transactions of the New York State Medical Society*, 1875.

Letzerich has recorded experiments with salicylic acid in a recent number of *Virchow's Archives* (Bd. 64, Heft 1, 1873). The experiments were intended to ascertain the influence that could be exerted by the new disinfectant over the diphtheria bacteria. Solutions of the acid well prepared, of four different degrees of strength—from 0.25 centigrammes in 1 grm. alcohol and 120 distilled water, to 0.50 centigr. acid in 0.50 centigr. alcohol and 20 grms. water. A few drops from one or the other solution were poured upon an object glass, on which had been emptied a vaccine tube full of the diphtheritic organism. With the weaker solution of the acid the zigzag movements of the bacteria ceased gradually; with a stronger solution, they were suddenly arrested. A rabbit was inoculated with the mixture, and showed no sign of either local or general infection; whereas in the control experiments, inoculations with the diphtheria mass caused local inflammation, followed by constitutional disease and death. Seven cases of diphtheria in the human subject were treated by salicylic acid, a solution of which was used to paint the tonsils. The solution consisted of one part of the acid dissolved in two parts alcohol and 250 distilled water. Twenty-four hours after its application the yellow diphtheritic membrane had become smaller and almost clear white. In three cases of adults it completely vanished by the second day, and by the third in two cases of children of 11 and 12 years of age. These five cases were all mild. Seven cases were treated exclusively by the internal use of the acid in doses of 0.30 centigr. At the end of three days the diphtheritic membrane was still present, but showed no increase. But the general symptoms—fever, anorexia, and diminution of urine—were all notably ameliorated. The local treatment was now begun, by washing the throat with a half per cent. solution of salicylic acid, and afterwards sprinkling the affected

parts with the dry powder. The results were striking. In one case the membrane was almost entirely gone by the next day, after a single application; and in the other case a second application completed the cure.

Two rabbits, infected with diphtheria by inoculation upon the back, were treated by the internal administration of salicylic acid, in doses of 0.25 centig. every two hours, and recovered. Salicylic acid was detected in abundance in the urine, as the masses of micrococci and bacteria disappeared from it. But when the inoculation was practised under the mucous membrane of the mouth, and diphtheritic exudations developed in the larynx and trachea, the acid was unable to arrest the progress of the disease and the animal died of croup.

In the last number of the *Archiv fur Pharmakologie*, Prof. Eulenburg has repeated the experiments of Fürbinger, who had found that salicylic acid would lower the temperature in rabbits artificially affected with septicæmia. But Eulenburg was unable to confirm these favorable results. In his experiments, both the putrid poison and the remedy were introduced into the blood by subcutaneous injection, the acid in doses of 0.10 decigrammes. After the first dose, temperature sank, but rose again and could not be controlled, and the animals finally succumbed.

In the last No. of the *New York Medical Journal*, *salicine*, in grain or half-grain doses, has been strongly recommended for chronic diarrhœa, either in infants or adults. It is supposed to act as an antiseptic upon the substances whose fermentation maintains the irritation of the intestine. Still another article appears in the last No. of the *Deutsches Archiv*.

As an antiseptic, however, *carbolic acid* continues to hold the first rank, and the many new applications that are constantly being found for this valuable remedy are all based upon septic theories of the disease to which it is applied The newest method of using it is by subcutaneous injection, as was, I believe, first recommended by Hueter for the treatment of various inflammations (*Berlin Klin. Woch.*, 102; *Centralblatt*, No. 5, 1874). Hueter made subcutaneous injections in acute phlegmons, in subacute glandular tumors, and on the borders of patches of traumatic erysipelas. He has also injected it into the cavity of the knee-joint in hyperplastic synovitis, and into the medulla of carious

bones. In the case of the white swelling, he obtained a notable diminution of the swelling, the pain, and the hectic fever. In parenchymatous inflammations, resolution was established, and in erysipelas the disease was immediately circumscribed. A one per cent. solution was used by Hueter, but Hirschburg, in a case of erysipelas developed around a contused flesh wound on the second day after the accident, used a two per cent. solution, immediately arresting the spread of the disease and affecting a cure in three days after six injections.

In the *Centralblatt* for February 21st, 1875, Aufrecht relates two more successful cases, and expatiates on the theory already advanced by Hueter. According to this theory, in erysipelas the carbolic acid destroys the micrococci that fill the cutaneous lymphatics and spread the disease; and in non-specific inflammations arrest the amœboid movements of white corpuscles, and so prevents the formation of pus.

During the last year, Dr. Jacobi has still further improved upon Hueter's method, by substituting for his subcutaneous injections, in the treatment of erysipelas, repeated inunctions with a mixture of carbolic and oleic acids, in the proportion of 1 part of the former to 8 of the latter. In 30 cases of hospital and private practice in which this method was employed, the disease was promptly arrested. The great power of penetrating the skin possessed by oleic acid, already utilized in such preparations as Squibb's oleate of mercury, properly suggested this mode of bringing carbolic acid in immediate contact with the poisoned lymphatics.

Kunze has injected carbolic acid under the skin of joints affected by acute articular rheumatism, and in 4 cases is said to have obtained striking results (*Deutsches Zeitschrift*, 1874.)

Finally, Ebstein and Muller, guided by a doubtful hypothesis, have used carbolic acid in diabetes, in order to arrest some unknown fermentation supposed to be the cause of the disease. In the first case treated, the urine had contained nearly 3 per cent. of sugar for four months (2.86); 15 grains of carbolic acid dissolved in 300 grammes of peppermint water, were taken in 8 days, and after 6 days the sugar disappeared. The treatment was continued during 4 months longer, and the glycosuria only returned 3 months after cessation of treatment, to be again cured

by its resumption. In the second case, the diabetes had existed in a mild form for 11 years, but disappeared in 3 months after treatment with acid. A third case was a failure (*Berlin Klin.*, 1873, Dec. 8; *Braith.*, Vol. LXX).

A monograph on carbolic acid, by Rothe, appeared in 1874, and contains a very complete review of its various applications, old and new. Among the latter is mentioned the inhalation of carbolic acid in the suppurative stage of phthisis. In two cases all the physical signs of disease vanished, but in 100 others improvement, though obtained, was only transitory.

The balance of testimony is against the utility of carbolic acid as an internal remedy in fevers; and we may, in fact, conclude with Rothe, that this remedy is to be relied upon in proportion as it is more concentrated, and can be more exactly applied to the focus of infection.

On the other hand, the reputation of *eucalyptus* in the treatment of fevers—at least those that are intermittent—is continuing to be maintained. Three cases of double quotidian are reported in the *Clinic* for Nov. 14, 1874, where, after the failure of large doses of quinine and arsenic, fluid extract of eucalyptus was given in drachm doses repeated every hour and a half, and effected a cure. Nine cases are given by Hirsch in the *Berlin Klinische Wochenschrift* (p. 364, 1874), of which 7 were cured. Mees (*Centralblatt*, 28th March, 1874) cured 25 cases out of 35; and Brudell (*Centralblatt*, April 11, 1874) was successful in 18 trials out of 33 cases. Total—80 cases, with 53 cures. The latter observes that eucalyptus is only to be relied upon for quotidian fevers, and is useless in quartans. Mees found the oil to be strongly antiseptic, and hindering the fermentation of glucose better than quinine. The amœboid movements of white corpuscles were arrested in 15 minutes with a solution of one-fifteenth per cent. Such a solution prevented suppuration in a frog's mesentery during 48 hours exposure. Similar experiments are consigned in an inaugural dissertation passed at Bonn by Siegen (*London Medical Record*, Feb. 4, 1874), who found that the oil prevented the decomposition of albuminous solutions or of blood, retards the growth of fungi in tartaric acid, and hinders alcoholic fermentations. Ringer has communicated to the *London Medical Record* (1874) the researches of Debray and

Rabuteau on the physiological action of eucalyptus oil, which is a liquid camphor. Topically, it congests mucous membranes. Internally, in doses of 10–20 drops, it acts as a general nerve stimulant, but causes a fall of temperature as a secondary effect. In frogs the reflex functions of the cord are depressed, and poisonous doses in human beings cause a general prostration of the nervous system. In these respects it is analogous to quinine. The oil is eliminated by the lungs, skin, and kidneys, and its elimination is attended by a great increase in that of urea. The amount of urea excreted daily rose from 20 to 40 grammes. This fact is not easily explained in the general theory of an antipyretic remedy. Schläger, of Gottingen (*Schmidt's Jarhbucher*, Bd. 164, No. 12), injected eucalyptus oil under the skin of dogs, and observed a slight rise in temperature as a consequence of the local irritation. When 5 grammes of the decoction were injected into the jugular vein, both the temperature and blood pressure fell. This was also the case if the vagi had previously been paralyzed by section, or by atropine, and it was inferred, therefore, that the eucalyptus acted, not upon them, but upon the musculo-motor apparatus of the heart.

The most extensive utilization of eucalyptus, however, promises to be for purifying malarious atmospheres. The experiment has been made on a large scale at the Cape of Good Hope, where 13,000 trees were set out one spring in a most unhealthy locality. In the following July, usually a most sickly month, not a single case occurred; and since then there has been complete immunity from fever. Gimbert (*New Remedies*, 1874, p. 105), in a note to the French Academy of Sciences, says that the leaves of the eucalyptus tree absorb from the air a great quantity of water, which is returned in the form of a sugared and aromatic secretion covering the pistil portion of the flower (*Arch. Gen.*, Jan., 1874).

Arsenic, the most famous succedaneum of quinine in the treatment of intermittent fever, has been newly investigated by several contributors to the *Archiv für Pharmakologie*. Boehm (Bd. 2, Heft 293) injected a watery solution into the veins, and observed an enormous sinking of the blood pressure. The heart and vagus remained intact, but the splanchnic nerves were found paralyzed to electricity, and presumably, as a consequence of their paralysis, the abdominal blood vessels were dilated. To

this dilatation was to be ascribed the lowering of blood pressure. This paralytic congestion of the digestive mucous membrane was probably the first stage of its inflammation that was excited when arsenic was introduced into the veins as uniformly as when it was given by the stomach. The epithelium desquamated, and frequent ecchymoses occurred. These were found also in the serous membranes, especially the endocardium. Contrary to Boehm's own opinions, we think these ecchymoses simply fatty degeneration of the walls of blood vessels, such as arsenic is well known to produce; for they would not result from mere paralysis of the vessels. In Boehm's experiments, there is said to have been no fatty degeneration of the liver or kidneys. This injection of the gastro-intestinal mucous membrane by paralysis of the splanchnic nerves is analogous to that produced by veratrine.

In the same number of the *Archiv für Pharmakologie* are related experiments by Johannsohn, upon the effect of arsenic on fermentation. When the metal was added to a solution of sugar and yeast, the process of fermentation was at first slackened, but after a while began again with renewed vigor, so that finally all the sugar was consumed. This temporary arrest was attributed to a modification in the functional activity of the yeast cells. From this fact, however, it would be erroneous to infer that the process of putrefaction would be modified in the same sense, for the reverse is true. When arsenic was added to solutions containing bacteria, arseniuretted hydrogen was evolved, and the development of bateria accelerated.

It is partly on account of this action of arsenic upon fermentation that it has been used in the treatment of diabetes—the hypothesis that would attribute to a morbid fermentation, the glycosuria characteristic of this disease. Lehmann has experimentally examined this practice, by injecting sugar into the mesenteric veins of rabbits, to whom arsenic had been given. It had been previously ascertained that if such injections were made upon fasting animals the sugar reappeared in the urine much more rapidly than if they had been well fed. In the experiments with arsenic, however, although plenty of food had been taken the sugar passed into the urine as rapidly as after a fast. Lehmann infers that a liver containing arsenic behaves towards sugar like a fasting liver, and therefore that arsenic is to be

absolutely condemned in the treatment of diabetes (*Archiv für Pharm.*, Bd. II, Heft 5). He maintains that it is only by large doses of arsenic that the formation of glycogen from starchy substances may be arrested. Hoffman, however, does not believe that decisive therapeutical inferences should be drawn from these experiments. But in a treatise on glycosuria that has just been published by Bouchardat, the use of arsenic is condemned by clinical experience. The patient seems to be benefited for a while, the quantity of urine, and amount of solid material contained in it were both diminished, and the sugar entirely disappeared; but after a short time the strength began to fail, a slight anasarca appeared, the medicine was interrupted, and in two days all the symptoms of diabetes returned. Bouchardat thinks that arsenic acts, not by moderating tissue changes, but by interfering with the elimination in the urine of the products of metamorphosis.

The other great "alterative" *mercury*, has been also made the subject of two series of experiments, each of which, though not revealing anything essentially new, is interesting from the precision which it offers to views long entertained. The first series is by Wilbouchewitch, and is published in the *Archives de Physiologie*, (1874, No. 495). The blood of syphilitic patients was examined by the apparatus recently invented by Malassez for counting blood corpuscles. Their proportion, as estimated in a cubic millimetre, was found to be notably decreased. Corrosive sublinate was then administered, and at the end of six or eight days the proportion of red globules became normal. But upon continuing the medicine they again diminished. Interruption of treatment was followed by a second rise, so that the number of globules was again normal at the end of ten days. When the sublimate was given to healthy animals either by the mouth or by subcutaneous injection, hypoglobulie was constantly produced. Two practical inferences were drawn from these experiments; 1st. That mercury accumulates in the blood so that, after mercurial treatment has lasted a few days, the dose of medicine given at any one time, is much inferior to that to which influence the patient is really exposed. 2d. That mercurial treatment must be frequently interrupted, lest the hypoglobulie induced by the medicine be added to that already caused by the

disease. With such interruptions, however, mercury could be made to correct syphilitic anæmia. The other experiments relate to the action of mercury on stomach digestion. They are communicated by Mail to the *Archiv für Pharmakologie* (Bd. III, Heft 5, u. 6). This observer found that the addition of 3 milligrammes of corrosive sublinate to peptic juice, diminished its digestive power one half; that 6 milligrammes diminished it 10 times; 10 milligrammes 20 times; and with 16 milligrammes artificial digestion was completely arrested. This effect is to be attributed to some new chemical composition between the corrosive sublimate and the pepsin. It is still further intensified by the addition of salt.

Ipecac is a remedy whose admittance to our materia medica dates from nearly as long a time as mercury. Yet investigations upon its action are constantly revealing new points of interest, or discovering new confirmation of virtues long ago claimed but more or less forgotten. Thus [Dr. Woodhull?] has written a memoir in praise of ipecac in the treatment of diarrhœa and and cholerine—memoir based upon personal experience at an army station. Also Polichronie has devoted a thesis to advocating enemata of decoctions of ipecac, in cholera infantum, when the vomiting induced by the Brazilian method was too fatiguing. Take 20 grammes bruised root boiled in 500 grms. water divided into 8 parts, of which each is boiled with the root in succession for ten minutes—3 decoctions mixed—boiled down to 240 grms. to which add 10–12 gtt. laudanum; this for 2 injections which is daily allowance. The principle treatment as advocated both by [Woodhull?] and Polichronie, is to give large doses of ipecac. and restrain emesis by the coincident administration of laudanum, Another modern application of ipecac, based upon an old indication, is to the treatment of habitual winter cough by inhalation of ipecac wine in spray. Sidney Ringer communicates to the *Lancet*, (Sept. 5th, 1874,) notes of 25 cases where this treatment was used, of which 24 were benefited; average duration of treatment was 12 days, and the number of inhalations varied from 3 to 18.

In regard to the theory of ipecac, Polichronie attributes its action in diarrhœa to elimination by the gastric mucous membrane and consequent revulsion from the intestine. Emesis is

retarded or prevented by section of the pneumogastrics, but as this operation renders vomiting nearly impossible in any case, the experiment can hardly be said to prove any influence of ipecac upon these nerves. Ipecac in decoction injected into the veins is also eliminated by the stomach, and causes vomiting as readily as when it has been ingested. Chouppé (*Action 'd Emetiques*, *Arch. de Phys.*, Jan., Feb., 1875,) has observed this elimination for *emetine*, the active principle of ipecac, which induces vomiting in doses of 0,05 given by subcutaneous injection.

Tartar emetic, according to Chouppe, acts partly in the same way, that is by irritation of the peripheric end of the vagus after elimination in the stomach. But its action persists after section of the nerve, and therefore must include some other mechanism as well. But since, as shown in the old experiment of Magendie, tartar emetic injected into the veins, will cause vomiting even when the stomach has been removed and a bladder put in its place—this observation of Chouppe is not of much value.

Apomorphine finally is said by Chouppe to act on the pulse and hence very little by ingestion, principally after injection, intravenous or subcutaneous. Harnack has made elaborate experiments upon apomorphine and upon the action of emetics in general (*Archiv für Pharm.* 1874, Bd. 2, Heft 4). He starts with the proposition that it is absurd to consider emesis as the unique, or even as the principal effect of emetics. Ackerman has long ago shown that the first stage of vomiting is always accompanied by marked acceleration of the pulse. Harnack found on a dog, after subcutaneous injection of 0,001 grm. apomorphine that the pulse rose from 30 to 78 per cent. As the blood pressure remained unaltered, he ascribed this frequency to irritation of the accelerator nerves, rather than to paralysis of the pneumogastrics. This opinion was confirmed by a second experiment, in which the pneumogastrics were paralyzed with 0,001 of atropine and a rise of pulse determined to 100 per cent. But apomorphine then caused a further rise of 10 per cent. The emetic dose of apomorphine is 0,001 grm. for dogs; 5 to 10 mgrm. for adult human beings; $\frac{1}{2}$ to 1 mgrm. for young children. The effect of apomorphine upon other parts of the nervous system was tested on rabbits, who could not vomit. After doses of from $\frac{1}{2}$ to 8 mgrms. were observed, great psychical ex-

citement, and exaggerated terrors, the ears trembled and reddened, the pupils were dilated; finally the respiration was enormously accelerated, after doses of from 10 to 20 mgrms. The above phenomena were followed by paresis of the posterior extremities, convulsions, finally death by dyspnœa. Harnack infers that numerous centres of brain and medulla are affected by apomorphine—respiratory, motor, sensory, and finally a centre presiding over emesis.

The existence of a centre for vomiting, distinct from the respiratory centre, is believed to be proved by the following experiment: A dog was narcotized by chloroform or morphine, and then received an emetic dose of apomorphine. No vomiting took place until the narcosis began to disappear. It was inferred that an "emesis centre" was paralyzed contemporaneously with the centres for movement and sensibility, while the respiratory centre remained intact. We think, however, that there is as much reason to infer from this experiment, that vomiting was deferred because the abdominal muscles were paralyzed in the narcosis. In the narcotized dog, the respirations were accelerated as decidedly as was the case in rabbits. But if chloral was given to rabbits in large doses, sufficient to paralyze the respiratory centre, the increase in the rapidity of respiration was very transitory, and soon followed by death without convulsions. It was inferred that the chloral had paralyzed those centres, whose irritation ordinarily caused convulsions. The effect of apomorphine upon muscular fibre was tested in frogs; 1 to 5 mgrms. were injected into a muscle, which, in a few minutes, completely lost its excitability. In an hour ensued complete general paralysis. This effect is analogous to that determined by other powerful emetics—tartarized antimony, cyclamine, asclepiadin, delphine, veratrin, digitalin. The association between these two effects is probably not accidental. The muscular paralysis determined in frogs, is represented in vomiting animals, by the profound muscular weakness which is a characteristic symptom of nausea.

The properties of apomorphine have been investigated in Paris by Dujardin-Beaumetz (*Bulletin de Therap.*, October, 1874), whose conclusions resemble those of Harnack. It is noticed that apomorphine acts upon nerve centres, and not at all upon

the mucous membrane of the stomach; hence cannot replace ipecac as a substitutive irritant in gastric catarrh. Chloral, chloroform and morphine, all prevent emesis after apomorphine.

Simply as an emetic the great value of apomorphine lies in the facility of its administration by hypodermic injection. Harnack's experiments, however, indicate that it may be used to meet much more complete indications. It has been used with great advantage as an expectorant in dry bronchitis. The dose for an adult is 0,001 mgrm. every 2 hours in muriatic acid and syrup (*Centralblatt*, July 4.)

After apomorphine, the most remarkable new medicine that has been introduced into the materia medica, promises to be *jaborandi*. The experiments of Sawyer, (*British Med. ical Journal*, Feb. 5, 1875), of Rabuteau, Gubler, (*Soc. Therap.*, and *Med. Times*, Feb. 27, 1875), and Sidney Ringer (*Pract.*, Dec. 1874,) all agree in proving this Brazilian plant to be a most active diaphoretic. After a drachm of the powdered leaves, taken in infusion, the pulse rises from 12 to 40 beats, the face and surface of the body flush, and the blood pressure falls, and profuse perspiration, followed by salivation, ensues. All these phenomena indicate relaxation of cutaneous blood vessels. On animals, this vaso-motor paralysis extends to the digestive tract, where intense congestion, sometimes leading to hemorrhage, has been observed. The temperature does not rise, but falls, and the combustions of the economy are not increased. In fractional doses, sweating and salivation are avoided and replaced by diuresis. In these various effects, jaborandi offers many analogies with atropine and muscarine; and unlike atropine, it is believed to stimulate the chorda tympani. Gubler attributes to it some special elective action on the glomeruli of the kidneys. He considers the therapeutic effect of jaborandi to be analogous to that of the Turkish bath, and indicated in rheumatism, in anasarca from cardiac or renal disease; also in chronic bronchitis and emphysema.

To concisely summarize this long enumeration, we should say, that the remedies whose introduction into practical therapeutics has been effected or confirmed in 1874, are the eucalyptus, propylamine, salicylic acid, bromide of camphor, apomorphine, jaborandi. That the most important new applications of

old remedies are, of carbolic acid to the treatment of erysipelas and phlegmonous inflammation; of quinine to intermittent fever by hypodermic injection; of hypodermic injections of chloral in cholera; of atropine for hectic sweating and salivation; of morphine in lypemania, of nitrite of amyl for chloroform poisoning and spasmodic nervous affections.

The most remarkable therapeutical experiments, whose efficacy is not yet conclusively demonstrated may be considered: the intravenous injection of chloral; the use of salicylic acid as a disinfectant and in the treatment of diphtheria; the treatment of bronchitis by ipecac spray; the injection of quinine into the trachea; the treatment of tetanus by calabar bean; the use of quinine as a succedaneum to ergot.

Among the most interesting physiological experiments are those of Claude Bernard, on the action of anæsthetics; of Anstie on the consumption of alcohol in the economy; those of the Edinburgh committee on antagonism, showing the action of arsenic on yeast cells and on fermentation; those of Martin D'Amourette on the contrast between large and small doses of calabar bean; of Wilbouchewitch on the effect of mercury on the blood corpuscles.

Finally, we must notice the publication of two systematic treatises on therapeutics, both from American press—a new edition of Stillé's classical treatise, and a hand-book by Horatio Wood. The first endeavors to estimate the value of medicines by a laborious comparison of their effects as observed upon sick persons. The second proposes to deduce the action of medicines in disease from experiments upon animals in health. While this latter method is absolutely necessary for the analysis of phenomena, it is, if used alone, entirely inadequate as a guide in therapeutics, and even dangerous if applied *a priori*. When, however, it is used to interpretate the observations of clinical experience and to refine upon them, it is invaluable. But it would be wrong to measure the difference between these two works, by the different estimate that may be made of these two methods of investigation; for even were the physiological method completely the superior, the superiority of Dr. Stillé's book would remain intact.

ART. II.—*Doctors and Druggists.* By G. W. CURREY, M. D. (Read before the Nashville Medical Society, Dec. 2, 1875, and referred for publication.) Nashville, Tenn.

Mr. President,—Twenty-five or thirty years ago, it was the custom of nearly every physician in this city to keep a supply of medicine on hand and to fill his own prescriptions. On or about the time of the establishment of the Medical Department of the University of Nashville, say about the year 1850, the custom was abandoned, and the more fashionable one of writing prescriptions was adopted. This has been in vogue ever since; whether for the better or worse is an undecided, and certainly a very important question to the members of the medical profession—important from the fact of the numerous abuses which have crept into the custom on the part of the druggist, as well as the patients, and which abuses demand serious consideration, and should by all means be corrected.

1. As the custom now exists, the members of the medical profession have reduced themselves to the level of outside drummers for druggists generally. Frequently the physician goes a mile or more to see a patient, regardless of the weather. He carefully and patiently diagnoses the case, writes a prescription, and as frequently receives nothing for his services but profuse promises, which are never fulfilled; while the druggist to whom the prescription has been carried, and who is at little or no expense, receives from 500 to 5,000 per cent. on his investment in greenbacks, or no physic.

2. A patient calls at the office of the physician, states his case (probably that of some specific disease), is thoroughly examined, receives a prescription; the patient promises to call next pay day or at the end of the month, and ten chances to one he is never seen or heard of again. The patient goes to the drug store with the prescription, has it filled, demands the original or takes a copy, and uses it again if ever similarly affected. But the above does not stop here. He gives a copy to some of his boon companions, and even sets himself up in a small way as a doctor, and undertakes to treat any venereal disease that may be confided to him, frequently without fee or reward.

3. The druggist frequently abuses the trust and confidence

reposed in him, and uses your prescription whenever a customer calls in and wants something to cure him. He says, "Doctor," for all preachers and druggists are doctors nowadays, "I went to see a private snap the other night, and have caught a little private case; can you cure me?" "Oh, yes," the druggist replies; "I have the favorite prescriptions of the best doctors of the city—Dr. Bleedhim, Dr. Buryhim and Dr. Burnhim—besides several others, and will cure you in ten days or less for five dollars." Thus your prescription becomes known, your trust and confidence betrayed. Others have reaped when you have sown, and your prescriptions used without any thanks or compensation to you.

4. Thus I have endeavored to show that in writing prescriptions you have placed yourself at the mercy of both the druggist and the patient, who, singly or combined, unthoughtedly it may be, but too frequently designedly, defraud the medical profession out of their fees. The patient has obtained his knowledge of the prescription by the payment of $5, or, as too frequently occurs, the doctor is dead beat out of it, while the druggist, in using your prescription, violates the trust and confidence reposed in him.

5. These propositions raise the question of the proprietorship of prescriptions. It should be distinctly understood by the medical profession, as well as by the druggist and patient, that a physician, in writing a prescription, writes it only for that particular case and occasion, and no other, and this fact should be distinctly enunciated in the next edition of the Code of Ethics. And the refilling of the prescription, without the knowledge or consent of the physician, is a violation of good faith towards him, and detrimental to his interest—even if refilled in the same attack of the disease, but much more so if in a subsequent attack. And hence, if there is any ownership, it belongs to the physician who prescribed it.

The patient's claim to the prescription extends to its being filled once only, and no further—it matters not what price he has paid for it. Prescriptions are numbered, and indicate that the prescription has been filled, and its further use ought to be prohibited, as with a cancelled postage stamp or railroad ticket. What would be thought of a man who would daily step up to the

bar of a saloon and demand a drink, or go to a baker and demand a loaf of bread, because he had paid for a drink or a loaf of bread a day or a week ago?

The druggist's claim to the prescription is equally or more absurd than that of the patient. He has filled it, and received a liberal compensation for it, and is in duty bound to keep it on file in regular order as a protection to himself, the patient and the physician. He is the custodian only of, and possesses no vested rights whatever in it; nor has he any right to refill the prescription for the patient without the knowledge and consent of the physician who wrote it; and if he should be so far influenced by avarice or want of correct views as to compound and prescribe your prescription for the treatment of similar cases, he is guilty of petty larceny, and a palpable fraud upon, not only the profession, but more especially upon the physician whose prescription he has used.

6. The responsibility of writing prescriptions is so great that we all desire that they shall be filled by a competent prescriptionist, and if any error has been made in writing the prescription in the hurry of business or otherwise, that the error may be detected in time, and if the prescriptionist should make a mistake, hold him to a strict accountability. Whenever or however mistakes are made, let the responsible party face the music like a man.

7. The avarice of man is proverbial, and druggists are no exception to the general rule. It has been charged that some druggists are in the habit of altering prescriptions, and that others will supply inert substances, if they have not all the ingredients directed by the prescription, rather than lose it. Whether these charges are true or not, I am not able to say, but rely upon the statement of others that such things have occurred.

8. The adoption of the present system of writing prescriptions has been detrimental to the medical profession, for several reasons: First, Each physician should be fully cognizant of the color, form, taste, composition and general appearance of all the medicines usually prescribed by him, as well as their therapeutic effects, their compatibility or incompatibility, the size of pills formed of certain bulky ingredients, their solubility, etc. This knowledge can be acquired nowhere else so well as at the pre-

scription case. Secondly. The present system has resulted in the springing up of a lot of little drug stores on nearly every other corner in the city, so that at present the number of drug stores in Nashville and Edgefield is very few less than the number of practising physicians; many of them depend almost solely upon their prescription trade, and if it was withdrawn they would dry up in a few months. Under this prescription system, too, each druggist has become a kind of sub-doctor or apothecary, who competes with you daily, and prescribes and treats more cases of venereal disease than any of you, and to whom you have, unsolicited, of your own free will and accord, exposed your hands.

9. The present system of writing prescriptions is also detrimental to the medical profession, in that it deprives many worthy young men of opportunities while studying medicine of learning at the prescription case of their preceptors a thorough and practical knowledge of materia medica; and in the absence of which it requires harder study, more time, and, after all, an imperfect knowledge of the subject. Thirty years ago, in the palmy days of the medical profession in this city, this was the custom, and the medical students who enjoyed such opportunities were well posted in anatomy, materia medica and chemistry, therapeutics and the theory and practice of medicine before they ever entered a medical college. How is it now? If the medical profession has degenerated, it is because the medical students of the present day do not enjoy the same privileges and opportunities. I know that the medical colleges are doing much, but they might, could and should do more to elevate the standard of the medical profession; but much, very much, can be learned in the old-fashioned office reading and observation.

I have thus endeavored to point out to you some of the abuses that have crept into the custom of writing prescriptions.

As every disease has its remedy, so has this; and the remedy is simple. *Cease* at once to write prescriptions. Restore the prescription case to each office, or shop, as it was called in the days of my boyhood. Fill the prescription case with a supply of the best standard preparations. Compound your own prescriptions. Confine yourselves strictly to the officinal preparations. Let there be no private formulas—no Smith's alterative

or Jones' tonic. Be guided by the United States Pharmacopœia and Dispensatory, and you will never go wrong. If you have not the time or inclination to compound your own prescriptions, engage the services of some competent young man desirous of studying medicine. Learn him the *modus operandi* of compounding and dispensing medicines while learning to prescribe them—teach him by example as well as by precept. Learn the young artisans not only the names, but the color, the taste, composition and general appearances of his tools, as well as their therapeutic effects, before authorizing them to scatter their pills and potions promiscuously, whenever they may have a call; and in after years they will thank you that you taught them in the school of practical as well as theoretical physic and pharmacy. Take an interest in the welfare of the young men now; give them employment, with or without compensation, as the case may be. Keep them from loafing around your street corners and in your billiard saloons. Teach them something that will be useful to them in after life, whether they adopt the profession of medicine or not. Make your offices attractive; let it be understood that you want an office boy or young man, and the position will be sought for greedily by the scions of the best families in the land. Keep your prescription cases neat and as clean as in any first-class prescription or drug store, and let us take a step forward by taking a step seemingly backward, and again adopt a too long abandoned custom. Should you do so, you will never have cause to regret it. It will increase your practice. It will increase your revenues. It will materially aid in breaking up the sale of patent medicines. It will be a blow at homœopathy, with its infinitesimal humbuggery. Yet some may assume that it is *infra dignitate* to convert their offices into apothecary shops, while they ride around in lordly state, and act and assume as if they are the especial embodiment of the medical profession, while they have aided and abetted more than all others to build up homœopathy.

I have said nothing of the financial feature of the proposition. Why should we apparently bend all our energies, give our time, talents and acquirements to build up the fortunes of druggists? Why should we act as voluntary drummers for these houses without fee or reward? What other business, or what other class of

men, were ever known to play second fiddle to their opponents, or show them their hands so plainly, as do the medical profession? What stock jobber or speculator, what trade, occupation or profession was ever known to act so absurdly, so blindly, so destructively to their own interests? Annually you are throwing thousands and tens of thousands of dollars into the hands of druggists that legitimately belong to you, and they do not even so much as thank you.

If it is profitable to the druggist to employ a precriptionist at $1,000 to $1,200 per annum to superintend the prescription department of their establishments, besides paying heavy rents, taxes, licenses, etc., incidental to a drug store, how much more ought it to be to the physician who has only office rent to pay, and that at nominal figures compared to rent of a drug store? Besides, what druggist was ever known to send a patient to a physician? Who of you ever received such a patient? While you are sending to the different drug stores from one to a dozen or more prescriptions daily, have they acted fairly with the medical profession? Do they not, day by day, prescribe and sell all kinds of medicines, standard and patent, to any and all who may call, with or without a prescription? I do not deny them their rights, but I do deny to them the right to prescribe for and treat patients, especially as they are the recipients of so many favors from the profession, in the shape of prescriptions. I do charge some of the druggists of this city with surreptitiously using the prescriptions of the profession for their own advantage without the knowledge or consent of the prescribing physician. I do charge them with refilling prescriptions without the consent of the physician. I do charge some druggists, on the authority of others, of altering and otherwise mutilating and substituting other and inert ingredients than those directed in the prescription. I do charge them with the sale of patent medicines, and of compounding and selling their own secret medicines for the treatment of specific and other diseases.

I do not make or prefer these charges covertly, but openly and above board. Nor do I make them for the purpose of injuring any druggist, individually, in his business; but I have made them for the purpose of warning the medical profession of

the dangers and difficulties that surround the present custom, to point out the abuses and suggest the remedies, and, if possible, to correct them and benefit our profession.

In thus arraigning such druggists, I am constrained to declare that they have consequently forfeited all claims, if they ever had any, upon the medical profession. They have abused the confidence and trust reposed in them. They are, day by day, warring against our interest, and now let them reap their reward.

ART. III.—*A Case of Traumatic Tetanus.* By A. M. FAUNTLEROY, M. D., Ex-President and Honorary Fellow Medical Society of Virginia, etc., Staunton, Va.

The following case presents features of sufficient interest to justify its publication. It sustains the observation that *minor surgical injuries* are the chief source of the traumatic form of this malady. It shows the influence of abundant alimentation; and seemingly illustrates the potency of *energetic treatment*, as the character of the symptoms was markedly severe from the outset of the disease:

As physician of the Virginia Deaf, Dumb and Blind Institution, I was called *Dec.* 7, 1874, to attend Harding White, colored boy, æt. 17, a scullion in the Institution. The *signa diagnostica* were admirably pronounced. There was marked rigidity of the muscular system, which manifested itself first in stiffness of the jaws, and extending to the muscles of the neck, trunk, and finally extremities. The countenance was anxious; the features were distorted; and the entire muscular system was spasmodically contracted at short intervals—productive of considerable pain, especially distressing in the region of the diaphragm. The muscles of the chest and abdomen were, in their contraction, as hard as boards, and the spine was curved by the rigidity of the muscles of the back. He could swallow only liquids, taken through a tube, with some effort. The pulse was frequent, over 120, and the respiration embarrassed; the body was bathed in a profuse perspiration. It was very evident that the boy was in a dangerous condition. Half a grain of morphiæ sulphas was at once hypodermically injected. I learned that about three weeks before he had severely bruised his left big toe by the falling upon it of one of the kitchen vessels. Upon examination, the skin of the toe was found to be dry and sphace-

lated, and he complained of painful "shooting" up the limb of that side to the region of the lower spine. A poultice was ordered to be placed upon the toe. The bowels being constipated, the following prescription was made: ℞. Elaterii, gr. j; ext. hyoscyami, gr. viij. M. et. ft. in pilula No. 4. S. Dose: One pill at an interval of two hours, until bowels are freely moved. And the following hypnotic: ℞. Chloral hydratis, ℈ij; tinct. hyoscyami, ʒj; syr. aurantii cort., aquæ puræ, $\overline{aa}$ ʒj. M. et. ft. mistura. S. To be taken at bed time.

Dec. 8. Slept some during the night. The pills, having freely moved the bowels, were discontinued. His condition was not materially altered. Prescribed the following: ℞. Extract. physostig. fab., gr. xxxij; alcoholis diluti, ʒj. M. S. Dose: Gtt. xx at intervals of two hours. Diet: rich milk, five ounces, with an egg beaten up in same, at intervals of four hours, during day and night; chloral mixture at bed time, and poultices to be renewed *pro re nata.*

Dec. 9. Rested better during night; spasmodic contractions of the muscles less frequent, but the rigidity of muscular system continued. Continued the calabar bean in like doses, and directed the chloral mixture to be administered at bed time; alimentation the same.

Dec. 10. Passed comparatively a comfortable night. Muscular spasms less frequent, and not so painful. Pupils unaffected by calabar bean. Bowels had been *spontaneously* moved, which was ascribed to the influence of the *ordeal* bean. Ordered gtt. xxx, at intervals of two hours, of the prescription previously given of the ordeal bean. Skin separating from the toe, with slight indications of suppurative action. Poultices to be renewed. Chloral hydras similar in dose to that previously used was directed to be taken at bed time. Alimentation same, with the addition of a pint of beef essence, to be administered during the night.

Dec. 11.—Passed greater part of the night in sleep—only awake when aroused by the night-watch to take the aliment prescribed. Condition manifestly improved; countenance less anxious; respiration easier, and pulse less frequent. The physiological effect of the calabar bean was now declared in the *contracted* and somewhat *immobile* state of the pupils. The diminution in the frequency and severity of spasmodic muscular contraction, and the *spontaneous* movement of the bowels, were alike attributed to the remedial agency of the *calabar* bean. Of the tincture of calabar bean previously ordered, thirty drops were directed to be taken at 10 o'clock at night. Then the chloral

mixture (40 grains) was ordered to be given. Nutriment same, at intervals of 3 or 4 hours.

Dec. 12.—Condition of the patient very much the same as on yesterday. Rested very well during night. Ordered a teaspoonful of whiskey to each ounce of the milk. Tincture of calabar bean continued in similar doses. Skin separated from injured toe, leaving a granulating surface, which was directed to be dressed with simple cerate.

Dec. 20. During the past eight days, the patient's condition has very much improved. The spasmodic muscular contractions much less frequent, and the rigidity of the muscular system has somewhat abated. Bowels *spontaneously* moved each day. Alimentation has been carefully enforced. The calabar bean tincture has been administered each day; and the patient has received nightly, at bed time, the chloral mixture (40 grains).

Dec. 25. During the five days past, the paroxysms of muscular contraction have become infrequent, though the rigidity of the muscular system is still manifest. The tincture of calabar bean was reduced in quantity to 10 drops, at intervals of two hours during the day. Alimentation same. Chloral mixture (40 grains) to be given at bed time, with orders to repeat the dose should the patient become wakeful in the latter part of the night.

Dec. 26. The patient passed an almost sleepless night, as the nurse failed to administer the nightly dose of chloral. During the early morning, the patient had a very painful return of muscular contraction, especially severe in the intercostal and abdominal muscles. Ordered the chloral mixture (40 grains) to be given at noon, and repeated near 11 o'clock at night.

Dec. 27. Passed a very good night without a return of the muscular spasms. Muscular rigidity very much lessened. The tincture of calabar bean was now *discontinued.* The chloral mixture (40 grains) was ordered to be given at bed time, and repeated at 3 or 4 o'clock at night. Alimentation same.

Jan. 15, 1875. Patient convalescent, and walking with uncertain gait about the room, owing to the relaxation of the muscular system. He is able to masticate and swallow beef steak and soft-boiled eggs with manifest relish and comfort. The nightly dose of chloral mixture has been given during the period.

Jan. 20. Chloral mixture discontinued.

Feb. 9. The patient is able to resume his duties in the kitchen of the Institution.

It would be impossible to say how much of the recovery in this case should be ascribed to the calabar bean, the chloral and

the alimentation respectively. But I am persuaded, from the close observation of the action of the calabar bean, that its beneficial effects were manifested in allaying the irritability of the peripheral nerves, and in blunting at the same time the central nervous centres in the receptivity of painful impressions, thus blotting out the salient pathological factors of this disease. The calabar bean clearly removed the constipation in this case, and induced the bowels to move spontaneously, thus eliminating a condition which would have been prejudicial and troublesome. Constipation is a marked characteristic of this disease, and Mr. Abernethy, from the relief attained by purgative doses of calomel and jalap, attributed it mainly to the constipated condition of the alimentary canal. Calabar bean meets this important indication in the fulfillment of its physiological rôle.

ART. IV.—*Tea Poultice in Erysipelas.* By B. G. McPHAIL, M. D., Acting Assistant Surgeon, U. S. A.

Not long since, an accidental circumstance lead me to apply a *tea poultice* to a case of erysipelas of the hand and forearm, and with such happy results that I have since used it in several cases—also for whitlow and osteitis. In every case it gave decided satisfaction. It is grateful to the patient, allays pain, and reduces inflammation.

Flaxseed meal made into a poultice with a strong decoction of *black tea* is a nice way to apply it, or the decoction may be applied warm on cloths. My opportunities for using it have been somewhat limited, and do not justify me in speaking too positively of its merits; but having been so much pleased with its action, I am induced to request a trial by the profession in the *above affections* and in *puerperal peritonitis.* Tannin has not given the same results in its pure state.

Camp Douglas, Utah.

ART. V.—*Tropical Dysentery.* By V. W. GAYLE, M. D., Ex-Surgeon of Navassa Island; Catonsville, Md.

Tropical dysentery differs from ordinary dysentery in many respects. It is very fatal in some countries. In India, the deaths from it double those from fever. In the Florida war, in

1836, it was very prevalent and fatal. The same may be said of the disease during the Mexican war.

The principal causes of the disease are, as in ordinary dysentery, heat combined with moisture, abuse of spirituous liquors, inordinate use of fruits, exposure to currents of wind and to night dews, sleeping in wet clothes or on damp, dirty beds, after a hard day's work, insufficient ventilation of quarters, drinking impure or too much water, etc. Suppression of the intestinal secretions—especially the biliary—and accumulations of mucus in the follicles are not without effect in causing or prolonging the disease. The causes that disorder, or, as it were, corrupt the secretions and the circulating fluids (such as ingestion of unripe fruit, meats of diseased animals, water holding putrid animal and alkaline substances in solution), exert a septic influence upon the mucous surface, the circulation, and ultimately upon the soft solids.

In tropical dysentery, the functions of the skin and liver are always implicated. The disease comes on as an ordinary diarrhœa. The patient complains that he has to go to stool half a dozen times a day; the stools are sometimes profuse, or they may be the reverse. The discharges have an unnatural, frothy, yeast-like appearance, and are light in color. Colicky and griping pains around the umbilicus set in. The patient loses his appetite, complains of thirst, sometimes of nausea; the skin becomes dry, pulse quick, tongue furred, and rapid emaciation develops. Now if the disease goes on unchecked, the appetite may improve, the tongue becomes cleaner, and the fever abates; but the flux continues, and the emaciation goes on. The dejections now assume all sorts of appearances—serous, mucous or gelatinous—often consisting of a uniform fluid, very offensive, feculent matter, which sometimes contains particles of undigested food; in fact, pills sometimes pass through the entire alimentary canal without change. Blood is often so intimately mixed with the dejections as to give them a uniform brick red (or darker) color. The dejections are sometimes as thick as tar in consistency; but very often they contain nothing but mucus and blood. I have known a patient with this disease to go to stool 48 times in 16 hours. The fever increases at night, when the pulse becomes irregular and weak. The tongue is now glazed and red; the

lips white; the teeth covered with sordes; the skin harsh and dry, and the body emits a cadaveric odor. There is often, also, vesical irritation, with frequent micturition, and the urine is diminished in amount.

The duration of the disease is from a few days to six months. Death occurs from peritonitis or exhaustion. Sometimes all of the chylopoietic viscera are involved in inflammation, and sometimes only the rectum. The disease is said to be mildly contagious by some writers, but I do not think it is at all so.

As lesions in this form of dysentery, we find portal congestion, inflammation of the mucous coats of the large intestine, often involving other organs and tissues; there is, in addition, a vitiation of the fluids concerned in assimilation of food.

During my stay on Navassa Island (over a year), I treated 160 cases of the disease, and lost only one. The treatment adopted was removal of all obstructions in the alimentary canal by mild laxatives—sod. et potas. tartras and magnes. sulphas being the best. Podophyllin is good, though its action is rather too drastic for Navassa. Castor oil with laudanum acts well. After four or six hours, begin with the following: ℞. Pulv. resini, gr. xxx, Pulv. ipecac, Geranin, $\overline{aa}$ gr. xx, Myricin, gr. xv, Acid. tannic., Pulv. opii, $\overline{aa}$ gr. x; M: Make 20 pills. S: Two pills thrice daily. I obtained good results in every case from this combination. I have often given ipecac, grs. xxx to lx, in combination with the above prescription, but with little effect.

ART. VI.—*What is Disease?* By W. F. GLENN, M. D. (Read before Nashville Medical Society, and published by request of the Society.) Nashville, Tenn.

Mr. President,—Out of the chaos of elements that primarily existed has been developed the whole creation of God, and the perfection of all is man. Man, the only creature endowed with the divine gifts of pure reason and free will to select himself what is best for himself—to obey the laws of God, live and be happy, or to refuse obedience and die by his own hand if he choose—even he might well blush and hide his face for shame when he beholds how grandly and harmoniously everything else

in nature conforms to the laws that control it. We would naturally expect him "who is but a little lower than the angels," to move, if it were possible, more in accordance with the laws under which he is placed than anything else in all the universe, being conscious of what is good and what is evil. But instead of finding him obedient to all the laws of health, and living a long and useful life, we see him every day afflicted with disease; and this brings us directly to the subject, What is Disease?

Disease is not, as supposed by some, an entity, an individual something that lays hold on a man and must be whipped out as you would an enemy in camp. It is not some grim-visaged monster who is standing ever ready to devour the human family, and can be kept off only by the administration of powerful or poisonous drugs; neither can I think it a direct affliction sent by God himself as a punishment for sin or as a special providence. Why should it be so? Can I believe that the Creator of us all would delight in the suffering of the smallest creature in the boundless universe for even one moment? No! Reason shudders at such ignorance, and wisdom shrieks in agony. Turn to nature. Open her leaves and read from her pages. Would we expect the sun to rise and continue in its brightness until noonday, or day be suddenly changed into night? Would we expect a grain of corn to sprout, grow to the height of an inch or two, then wither away? I answer, no. Then if God does not violate his own laws with that part of nature which has not free agency, why should he with that which has?

> In the first dawn of beauty, in the first flash of light,
> Should the daylight be robed in the darkness of night;
> Should the bright morning star pass fruitless away.
> And break to the earth the fair promise of day?
> Ah, no! Then why thus fade the loveliest flowers?
> And why do the young and the beautiful die,
> Ere they drink of the raptures of a summer's sweet hours—
> Ere the brow hath a sorrow or the bosom a sigh?

Disease is none of these things; but it is simply an aberation of health. It is only an unbalanced condition of the vital forces. Man I do not believe is a trinity or a duality, but a unity. Man's spirit is himself, his life, all that he is, and dwells not in the pineal gland or in any other special portion of his body; but circulates or lives in every atom that composes his being. In health, this vital principle is equalized throughout the entire system; in disease the equilibrium is destroyed—it matters not what may be the cause.

Physiologists tell us that food taken into the stomach is first formed into chyme, then chyle, and as such is taken into the circulation; and by the "process of assimilation" is made a part of our physical being. But food sustains life; therefore, I would ask him to tell me how or by what process it is that food is converted into life—into that force, that living, breathing, walking, thinking entity we call man? He folds his hands in silence, and answers not. The true philosophy of disease will never be understood until this is discovered. For, understanding how that is accomplished, we understand the "philosophy of health," and we can then easily understand disease. But until we know positively what health is, we cannot know beyond a doubt what disease is, and more especially will we know little about its treatment.

To my mind, there is but one disease, and that is an unbalanced condition of the vital forces. What we call a great variety of diseases are but symptoms of that one disease. Our ablest efforts have been put forth, I think, to a great degree, in the wrong direction. We have started on the wrong basis. Taking for granted that a great variety of diseases must necessarily exist, we have spent most of our time in learning to treat disease after it has attacked the individual, when we should have labored to learn what was the primary cause of all disease, and sought out the means to prevent it.

If no man ever disobeyed the laws of health, I do not think you would ever have a death under one hundred years of age, unless by accident. If parents are perfectly healthy, their children are of necessity born healthy; then if they obey strictly the teachings of nature, they could almost defy disease. Men used to live to be very old, but now they have cut their average number of years down very low indeed.

How shall we proceed to change this state of affairs? How can we prevent man from being diseased? It can only be done by educating the people, and diffusing a knowledge of anatomy and physiology—not by keeping these things confined within the limits of the profession. I have no patience with sectarianism of any sort. I meet cultivated men and women every day who have diplomas from the best colleges in the world, and yet they cannot tell the location of their liver or its function; or

even mention the most digestible articles of food. Is there any knowledge more important to man than knowing how to preserve his own body? It is a burning shame to see him calling himself intelligent, yet walking through life totally ignorant of himself, so fearfully and wonderfully made. It does no good to tell a man that such a life is best to lead, and such and such food is good, unless you can make him understand the importance of it. Instead of obeying nature's teachings, it seems as though man has taxed his intellect to find out how many poisonous articles he could accustom his system to use, calling them luxuries.

While such a state of things as this exists, while man's nervous nature is continually saturated by the odious poisons of tobacco, coffee, &c., and while in the soft hours of night when he should be asleep, he is reeling under the influence of alcohol—that which has caused so many a heart to break, so many tears of bitterness to fall, and consigned so many of the fair flowers of earth to an untimely grave, we need not wonder at disease or at crime. When will man realize his true mission, and show, by his life on earth, that he is indeed but a little lower than the angels? When he studies the nature of laws under which he exists, and learns to obey them, then will our brightest anticipations of the Millenium be realized, and our most beautiful dreams of heaven on earth be fulfilled.

The most tyrannical despot, the most powerful enemy with which the world has to contend, the most galling of all yokes, is ignorance. Then let all be well educated and instructed in the great truths of nature. It is exceedingly beautiful to reflect that every great teacher the world has known embodies in his every lesson a calm exhortation to get wisdom. Its healing influence and saving power have been felt by them all. The day is now dawning when old and foolish dogmas must melt before the genial rays of wisdom as the snow flake before the sun. Then lift up the flood gates of the mind, and let the pure living waters of wisdom flow freely in and wash the black stains of ignorance and superstition from the face of the earth forever.

The Pecuniary Cost to Philadelphia of the Small-pox Epidemic, 1871–2, was $25,478,978—estimated by Dr. Benj. Lee, in the *Sanitarian*.

Correspondence.

Blood-Letting in Disease.

Mr. Editor,—The following article was published in the *Medical and Surgical Reporter* (January 13, 1872) at a time when the lancet had fallen almost entirely into disuse as a therapeutic agent, and when to take such a stand on the subject of blood-letting in the treatment of disease was to expose one's self to animadversion from almost every quarter. Nevertheless, the paper was prepared after due deliberation, and under a strong sense of duty to the community and the profession, was sent forth to the world. Soon after its publication, articles and allusions to the subject of blood-letting as a remedial means in combatting certain symptoms in particular affections appeared in medical journals; and finally, at the last meeting of the American Medical Association, Prof. Gross, of Philadelphia, had the temerity, as some supposed, to read an elaborate paper on the "lost art." Without alluding to this paper at all—which, possibly, he never saw—he went over, though more at length, the identical ground it occupied more than three years before. It is hardly to be supposed that the distinguished Professor inter ded any discourtesy to the writer in omitting to mention his article. It is certain, however, that a more full and thorough endorsement of the same facts could hardly have been made, than was his elaborate essay, of the brief paper published below. No originality is claimed for anything it contains. But the application of the remedy has given more satisfactory results than any other therapeutic measure in the treatment of many diseases, and as such has been urged upon the attention of medical classes in Savannah, Ga., and in this city, before which the writer has appeared as a Professor, for more than twenty years. And the assertion is ventured without the least hesitation that it will be found fully endorsed and sustained by scientific practitioners of the healing art for a thousand generations to come. Principles are as eternal as their author, and will bear repetition or application indefinitely:

"It may seem strange to some that it should be thought necessary by any one to call the attention of the profession at the

present day to so ancient a remedy as blood-letting, and particularly to claim for it the highest rank as a therapeutical agent. And yet the writer feels that it should be done in the interests of humanity, if for no other motive or cause. It constitutes no part of his purpose, however, to attempt a history of the remedy, or to epitomize its leading facts and great achievements in the past, further than may be necessary to a presentation of the advantages it is capable of affording in the treatment of disease at the present time. It is proper to remark, in passing, that it shared the confidence, to a greater degree, of those physicians whose names have come down to us as the great intellectual luminaries of the ages in which they lived, than *any other remedy* whatsoever.

Though shrouded in the impenetrable darkness of the unknown past, the use of blood-letting in the treatment of disease was, doubtless, like many other agents, the result of accident, and at a period nearly, if not quite, coeval with the creation of the tribes of the higher order or varieties of the human race. In looking down the shadowy corridors of the past, we find it occupying high position in the healing art. Hippocrates places it, so to speak, at the top of the list of therapeutic agents, and speaks of it as a remedy familiarly known and used or practised for the relief of disease by others as well as himself. Asclepiades, a Greek physician of great renown, who practised in Rome more than a hundred years before the Christian era, resorted to blood-letting to a considerable extent. He also used scarification, with cupping, in the treatment of certain morbid conditions. Aretæus was not only an advocate of the several methods of extracting blood in vogue at the present time, but was among the earliest, if not the first, to practise arteriotomy. In speaking of him, Haller says: '*Arterias incidit ante Galenum, in temporibus et ad aures, oblique.*' Then the methodic sect, Celsus and Galen, were all the warm advocates of blood-letting.

The Arabian physicians, of whom Avicenna was the most prominent and justly distinguished, adopted the practice of the Greeks in all essential respects. The Egyptians resorted to blood-letting in all its varieties. Paracelsus, notwithstanding his elixirs, used blood-letting quite extensively in the treatment of disease.

With few exceptions, including the periods from Paracelsus and revival of learning in the 11th century, on down to the first quarter of the present century, blood-letting has had for its champions and supporters the brightest intellects of the profession. The second quarter of the 19th century had fewer advo-

cates for the use of our remedy than probably any equal period of time in its history; and that, too, when neither superstition nor religious fanaticism can be regarded as having exerted any influence on the practice of the remedy. Why, then, has bleeding been so little resorted to in this period? Is the type of diseases more *asthenic* than formerly? Or are there remedies of *equal* efficacy that have been substituted for sanguinous depletion?

As the writer is voluntarily on the stand before the public, it is proper that he should furnish such testimony as he may be able from long and varied experience; and in doing so, he flatters himself that satisfactory answers will be given to some of the above interrogatories. In offering his experience with the lancet, no arrogation of superior sagacity, or claims of a better acquaintance than others with morbid phenomena is attempted; but simply a statement of some of the beneficial effects witnessed from its use in a great number of cases, in a practice extending over a period of nearly 30 years, between the 30th and 39th degree of north latitude.

No hesitation is experienced in pronouncing the lancet *sans pareil* in the treatment of a large number of the diseases to which flesh is heir, in several of which *fashion* has unfortunately inhibited its use in these latter days—even age and experience in practice being forced in such cases to yield to the inexorable demand of the fickle goddess.

Where the following conditions and circumstances receive, as they always should, careful consideration before an important remedy is administered for the relief of morbid action, viz.: Race, age, sex, temperament, previous and present condition of the patient—bleeding will, when called for, yield results of a more highly satisfactory character than *any other* remedial agent! The effects of sanguineous depletion are marked and unmistakable in the production of antiphlogistic, sedative, antispasmodic and alterative impressions on the system. It will thus be seen in what a large number of cases it may be resorted to with great advantage in their treatment.

In *all* inflammatory diseases, when properly timed under a judicious appreciation of the above named conditions, the writer of this article has no hesitancy in denominating the lancet the most scientific, as it certainly is the most efficient and valuable agent in our present list of therapeutical resources. If there is one single fact in the whole range of our professional observation and experience that may be certainly regarded as established, and beyond the possibility of contradiction or satisfactory refutation, it is the utility, nay, more, the indispensable neces-

sity for sanguineous evacuation in the prompt and scientific treatment of inflammation!

Just here we are strongly tempted to disregard our intention when commencing this article, and go somewhat into detail concerning our experience with the lancet in the several forms of inflammatory disease. But a moment's reflection assures us that a volume might easily be filled with such cases, much less all the pages of this journal, could they be devoted to us exclusively, and we must therefore hasten to the mention of other conditions in which the most gratifying results have been experienced from blood-letting.

In cerebritis, arachnitis, apoplexy, congestion or extravasation, in the eclampsia, and, in fact, in almost every form of cerebral disease, the lancet is the most important remedy at our command. In certain conditions of the brain, it is not only simply *indispensable to the successful termination of the case, but often the only remedy necessary* to be used at all. It is often not only the best, but frequently the only remedy capable of relieving the obstinate constipation resulting from inflammation of the muscular coat of the intestines. In hernia, in the rigidity and spasm of the os and cervix uteri in labor, to say nothing of other conditions of muscular spasm and contraction beyond the anæsthetic reach of chloroform; and lastly, its alterative action is quite manifest in promoting the absorption of fluids in various cavities and situations of the body.

In conclusion, it is contended that *the necessity for the use of the lancet is as great at the present time as it ever was in the past*, and the type of disease has undergone no such change as to render the abstraction of blood unnecessary or improper in the successful management of *all* cases attended with a full, tense and quick pulse. This subject is one of great moment, yet capable of easy comprehension and satisfactory demonstration, and as such the careful attention of junior members of the profession is respectfully and earnestly invited to it. We feel warranted, from our long experience, in saying that any intelligent physician who will resort to the lancet in a few cases calling for its use, will not be likely to lay it aside afterward, though he should encounter the jeers of some, or the *quasi* assent of others, who might entertain, from early training or other cause, prejudice against its use; and such, we feel assured, will be the testimony of all who have not sacrificed the lancet on the altar of fashion. The aid of the profession is invoked for the purpose of placing once more on the stage of usefulness a remedy which has played so important a part in the almost entire history of our therapeutics."

HARVEY L. BYRD, M. D.

Baltimore, 139 *Arlington Avenue*, *October* 25, 1875.

Syphilization—Observations in Prof. W. Boeck's Syphilitic Wards in Norway in 1875.

Mr. Editor,—In May, 1875, I visited the hospital in Norway, where Prof. W. Boeck has his ward for syphilization. In this country we hear very little of this method of treatment, while in Norway it is carried on with remarkable success. I studied the *modus operandi* very carefully in the wards; and from my own observatiens and from the information obtained from Prof. Boeck's latest writings, *Recherches sur la Syphilis appuyces, de Tableaux de Statistique tires des Archives, des Hopitaux, de Christiania* (first published in 1862 and revised in 1875), I give your readers a sketch of what syphilization is as practised by the originator of the cure.

The Professor has a large ward in the Rigs Hospital, where syphilization is carried on to an enormous extent, with the happiest results. The doubt that I had previous to my visit as to the value of the treatment soon vanished; for here before my eyes stood a Professor who, for 25 years, has practised this treatment, and presented two statistical tables—one showing the result with the ordinary treatment, viz., mercury and iodide of potassium—the other the result after syphilization. These statistics were prepared by the Professor after long and careful observation. But the convincing evidence placed before me was the exhibition of patients upon whom the method had been practised. From the statistics (to be found in his *Recherches*, 1875), he proved that in 30 per cent. the result was in favor of syphilization. I am therefore surprised that this treatment is not adopted in the American hospitals. I am aware that the voice of the profession is against it; but when it is demonstrated from the experience and statistics of a man with such vast observation as that of Professor Boeck, one is compelled, it seems to me, to admit the facts. I would like to give the reader a complete statement of the *modus operandi* and the Professor's views on the various forms of chancre and its treatment, and on constitutional syphilis and its treatment, but space here limits me to a simple outline. A thorough understanding can only be obtained by reading his *Recherches sur la Syphilis*, 1875, which, I hope, will soon be found in our American libraries.

When a patient with constitutional syphilis presents himself to Prof. B. for treatment, he proceeds at once to inoculate him

with pus from his own chancre. Three inoculations are made every third day on the trunk; but when this matter no longer gives positive results, he uses virus from a second person who is suffering from constitutional syphilis, when again positive results are obtained. When it becomes impossible to produce a chancre on the trunk on account of repeated inoculations, positive results may be again had by using the same matter on the extremities. The inoculations are continued as long as positive results can be obtained. It is observed that after each successive inoculation the chancres, as a rule, present less and less acute symptoms. When the system has obtained immunity from one virus, the second, third and fourth even may be carried through several generations until at last there is no susceptibility whatever to any syphilitic matter—either from the soft or hard chancre.

Prof. B. observes that if by continued inoculations with the same virus negative results are obtained, this same virus can be inoculated into a second person with positive results, when the virus from this latter person may be transferred back to the first individual—now giving positive results in from 1 to 4 generations; and again, as I have said, if the inoculations refuse to present positive results, for example, on the trunk, they can be had if the virus is used on the extremities. The virus from this latter inoculation may be now transferred to the trunk with positive results, but always less intense than previously. The virulence, or intensity, so to speak, of the pus, is not proportioned to the amount of inflammation attending the sores, but to the number of generations through which it has passed. One virus may be carried through only 6 generations, while another sample may pass through 80; but it is always best to take the pus from the last produced chancre.

The period required for inoculation to take place after the introduction of pus by the lancet, is, as a rule, about 24 hours. The co-existence in the person of typhus, erysipelas, pleuritis or pneumonitis prevents the inoculation of syphilis. In cases, too, where the patient with syphilis has been treated internally with mercury and iodide of potassium, syphilization is not so successful as in cases where no internal remedies have been used.

In his *Recherches sur la Syphilis*, 1875, Prof. B. gives the results of inoculation with virus put up in glass tubes, similar

to vaccine virus. Matter thus saved will give positive results up to five days old. He has further experimented with virus softened, and virus frozen and then warmed, and with dry crusts; also with syphilitic matter mixed with water, which showed inoculability until the dilution amounted to over 100 parts of water, beyond which the virus was uncertain. A large number of other experiments were made by the Professor, such as mixing the pus with various chemicals, acids, oils, &c., the results of which are too lengthy to give here.

Boeck remarks in his work that the right way to study the disease is through the poisonous elements which produce syphilis. But it seems that in the 400 years during which the disease has been treated this idea has not engaged professional attention. He further says that it was not until syphilization occurred to him that he thought of studying the virus itself. He holds that the soft and hard or indurated chancres are produced by the same venereal poison, and that it is the system of the person inoculated which decides the result after inoculation, whether a hard or a soft chancre will occur. In the great number of experiments which Prof. B. has witnessed, he has found that by inoculation of the soft chancre an indurated chancre has been the result, and *vice versa*. He also records cases which show constitutional syphilis to follow soft chancre. His views are these: If an individual is inoculated from a very intense virus, this virus causes more violent and rapid inflammation, and thereby granulations are formed which envelop the chancre as a sac, and bubo results. On the other hand, if the virus is less intense, as it may be, less inflammation is set up, the process is slower, no bubo is formed, and consequently there is more chance for absorption into the system; hence the indurated chancre from the less intense virus. This, he says, could be proved by inoculation in a non-syphilitic person, but which he cannot do, as he highly disapproves of inoculating a normal system with syphilis. The Professor gives in his *Recherches* some very interesting facts on the treatment of the venereal chancres and the formation of bubo and its treatment, which differs from the American system. These, however, are too lengthy to give in this letter.

Yours, &c.,

K. T. Stabeck, M. D.

Davis, Illinois, November, 1875.

Original Translations.

From the German. By Wm. C. Dabney, M. D., Charlottesville, Va.

1. **Radical Cure of Hydrocele by Electro-Puncture.** By Dr. Erhardt. (*Memorabilein* xix, Heft 8, and *Medicinisch-Chirurgische Rundschau*, October u. November, 1875). Whilst for the electro-puncture of hydrocele the constant current has generally been employed, Erhardt reports the favorable results which he has obtained in four cases by means of the interrupted current (the small apparatus of Gaiffe) [which costs only about $12, and can be carried in the coat pocket]. In the first cases, where the hydrocele had existed but a short time, and no puncture had been attempted previously, notwithstanding that there was a considerable accumulation of water, resorption occurred in from three to five days, without any reaction whatsoever. In the fourth case, described more in detail, it required three weeks for resorption to occur.

B., 52 years of age, had a hydrocele on the right side of eight years' standing. Tired of repeated tappings, he came to Erhardt and was treated by him by means of electro-puncture. Two large, pointed, un-oiled needles, which were connected with the metalic conducting wires of Gaiffe's apparatus, were thrust into the swelling at a distance from one another of six centimetres, and to the depth of three centimetres, so that the needles extended into the fluid. The tunica vaginalis was very tough and somewhat thickened, so that it was difficult to puncture it. The apparatus was set in motion ; the pain was very bearable. After five minutes the stream was reversed, and after five minutes more the needles were withdrawn, when it was found that the needle attached to the negative pole was black and oxidized. No treatment, but to lie in bed for two days. The absorption did not take place for a long time (three weeks), but was complete, as Erhardt could verify four months afterwards. He closed with the remark that where there was considerable degeneration of the tunica vaginalis the effects would not be permanent.

2. **On the Treatment of Erysipelas by Subcutaneous Injections of Carbolic Acid.** By Dr. E. Böchel. (*Gazette Med. de Strasburg*, 1875, No. 5. *Rundschau*, October u. November, 1875). Böchel has followed the recommendations made by Hueter, for the treatment of erysipelas by the subcutaneous in-

jection of carbolic acid, in a number of cases. The mode of application is as follows: Each morning and evening he injects five or six syringes full of 1½ per cent. solution of carbolic acid in a broad circle, distant from the edge of the inflammation about one centimetre. The erysipelas increased considerably on the first day of the injection, but generally ceased on the third or fourth day. Böchel employs these injections not only as a panacea, but as the safest remedy we possess, since it often puts a stop to a very severe erysipelas within 24 hours.

3. **Localized Lesions of Muscular Nerves Occurring in Muscular Rheumatism.** Von Dr. Fr. Richter. (*Deutsch. Archiv f. Klin. Med.*, xv–xvii, 1875. *Rundschau*, October, 1875.) Richter gives the following resumé of his views on this subject: "In the lesions of muscular nerves occurring during rheumatism, the primary affection is not the hyperæmia and inflammation, but the neurosis of the muscular nerves, which may come on in consequence of irritation and disturbances of their conducting power, and which shows itself as neuralgia, croup or paralysis. The irritation of the muscular nerves, and the irritative and subsequently paralytic conditions which accompany it, are followed by two results, namely: first, hyperæmia, with widening of the vessels, brought on by paralysis of the sympathetic; and secondly, the inflammatory affection of the muscular structure, which proceeds from the connective tissue. The neuro-paralytic hyperæmia, with its consequences, as, for instance, the exudation, causes a still further destruction of the already compressed muscular nerves; so that this, in conjunction with the previously mentioned inflammation of the connective tissue, causes an increased deterioration of the already disturbed motility, and finally leads to atrophy. The irritation of the sympathetic may also cause trophic disturbances."

Richter recommends, besides embrocations, the application of the constant current in moderate intensity when the pain is great, and the interrupted current in order to remedy the existing disturbances of motility. He also recommends suitable exercise, and warm and cold bathing.

4. **The Trepanning and Scraping of the Long Bones in Cases of so-called Neuralgic Ostitis.** By M. Gosselin. (*Gaz. des Hopitaux*, October 26, 1875, and *Allgem. Wiener, Med.*

Zeitung, November 23d, 1875). M. Gosselin made some remarks on this subject at a late meeting of the Academy of Sciences at Paris, which are reported in the journals mentioned. He says: "There exists a certain form of ostitis but recently described, which may be recognized by two prominent symptoms: progressive swelling, and violent pain, which comes on in paroxysms, resists all therapeutic applications, and causes sleeplessness, alarming debility, &c." To these cases of ostitis Gosselin gives the name "ostitis of a neuralgic form." Gosselin performed the operation of trepanning in the manner proposed by Brodie, as he thought an abscess was present. Instead of pus, he found only serum or a fungus mass in a bone which looked as if it had been burnt. In these cases, which exhibit the hyperostosis characteristic of inflammation of bones, Gosselin ascribes the pain to neuritis or pressure on the nerves. However this may be, the trepanning of the bone *always* gives relief from the pain, and he recemmends its use when other local and general remedies have been used without effect. After some experience, Gosselin thought the operation in the cases indicated not dangerous—that is to say, in those cases where the bony tissue has been thickened by chronic inflammation. After the operation, a *wadding* bandage should be immediately applied, and not removed for 20 days.

Proceedings of Societies.

MEDICAL AND SURGICAL SOCIETY OF BALTIMORE:

(Reported by G. L. Wilkins, M. D.)

November 11, 1875.—**Absent Menstruation.**—Dr. Cathell was called to a lady, aged 42 years, who had never menstruated. The uterus and appendages are normal, and she presents every evidence of ovulation, except the flow. Abdomen large and pendulous with an excessive development of adipose tissue. For some months past she has been troubled with tympanites, and at each menstrual epoch the collection of gas becomes so excessive as to occasion great distress. It was determined to puncture the abdomen, and a small size aspirator needle was introduced, but neither gas nor fluid escaped; a larger size needle was introduced, and with the aspirator, four gallons of gas was drawn off. Following the operation, slight peritonitis took place.

Puerperal Mania.—Dr. Leibman attended a lady seized on the ninth day after her confinement with mania; the delusion assumed the character of extreme hatred to her very near friends. Ordered chloral hydrate, grs. x, repeated every two hours. After the exhibition of a few doses, sleep was induced, and by the next morning she was restored to reason. Except slight nervous trouble, she entirely recovered at the end of three weeks.

Atrophy of the Optic Disc following Post Partum Hemorrhage.—Dr. A. Friedenwald was called to a lady in confinement last March; labor prolonged on account of rigidity of the os, which compelled him to stay with her all night. At 5 o'clock the next morning dilatation was complete, but the pains had ceased, when he accomplished a speedy delivery with the forceps, and left her at 7 A. M., doing well. Had been home but a short time when he was hastily recalled, and found that hemorrhage had taken place. He turned out the coagula, gave ergot and left her improved. She recovered rapidly and was sitting up on the eighth day. That afternoon she was taken with a chill and return of the hemorrhage; found her with a blanched countenance and nearly pulseless. This time recovery did not take place so rapidly as on the former occasion. She was greatly weakened and complained of headache, giddiness and dimness of vision. On the fourth day after the second hemorrhage, profuse perspiration ensued, which seemed to prostrate her even more than the floodings. The disturbance of vision was now still more decided, the defect assuming both the characters of contraction of the field of vision and diminution of acuteness of vision. Notwithstanding a free use of quinia and iron, she remained for a long time prostratated and anæmic. The right eye recovered, but the other is totally lost. An opthalmoscopic examination of the lost eye shows paleness of the fundus, attenuation of the retinal vessels and contraction of the optic nerve. This form of trouble is not unusual in puerperal mania, but the patient generally recovers while in this case permanent impairment of vision resulted.

Nov. 18.—**Anomalies in Obstetrics.**—Dr. Ogle related some interesting cases occurring in his obstetrical experience, among which were included cases of fecundation without menstruation, of utero-gestation running a period of ten months, and a case of placenta prævia with a total absence of hemorrhage. In one case a lady gave birth to five children, each time running full ten months.

Dr. Morris remarked that cases where mothers have given birth without menstruation, are mentioned in the text-books and are not infrequent. He has also seen cases of utero-gestation lasting ten months. He discredits the belief that the fœtus is

retained in utero to give strength and tone; on the contrary, he generally finds that such children are healthy and strong.

Dr. Lynch said that he had attended a lady twice, who, each time went full 300 days. He has met women who conceived without menstruating. In his opinion menstruation is only connected with ovulation in consequence of enforced chastity.

Dr. Morris remarked that few of the lower animals menstruate, and that menstruation can be accelerated by sexual excitement.

Dec. 2.—**Craniotomy.**—Dr. Erich, a few days previously, performed his twelfth craniotomy. The patient was a strong healthy German woman; primipara. Antero-posterior diameter of the pelvis not over two inches; crown presentation; dilatation complete, but the pains had no effect upon the head. As it was evident that delivery could not be accomplished in any other way, craniotomy was determined on. The German perforator working in a canula was applied, and a button of bone was removed. The brain was broken down, and Meigs' forceps were introduced, and the cranial bones were torn away, but delivery could not be accomplished until all the bones were removed except the base of the skull, and even then on account of the breadth of the child's shoulders it required great strength to deliver.

Dr. Seldner thinks he can very much simplify the operation of craniotomy, by following the teachings which he received while in Vienna. Perforate the cranium with the bent trepan of Braun; and after having made an opening, introduce a long tube and rotate the same in the cranial cavity so as to disturb the brain; then inject water through this tube and evacuate the cerebral mass or as much of it as can be conveniently washed away. After this, introduce the modified Simpson cranioclast, which is nothing more than a pair of very strong bone forceps, and extract. If the shoulders will not yield, Dr. S. turns the fœtus and delivers by the feet. If the head becomes locked above the superior strait, he perforates the basis crânii as in simple craniotomy in head presentation, and after having removed the resisting part (which is generally the brain), the head collapses and permits its easy extraction. The easiest method of measuring the antero-posterior diameter of the superior strait, is to carry the middle finger to the promontory of the sacrum, and then bring the index finger to the symphisis pubis and withdraw the fingers; the distance between the extremities of both fingers will give the exact diameter.

Dr. Erich, in one case, perforated and delivered, when he found a second child, which he turned and with great difficulty delivered without perforating.

Rheumatic Paralysis.—Dr. J. J. Caldwell, one year ago, at-

tended a woman, æt. 55, for paraplegia due to rheumatic metastasis, which yielded kindly to electricity, nux vomica and iodide of potassium. Last May after her partial recovery, while in a stooping posture, she was seized with hemiplegia. He found her slightly comatose, eyes and tongue divergent, and upper and lower extremities of the left side paralyzed (motor and sensory).

The case has since recovered under the same treatment adopted in the first attack. This case is remarkable in that we have a history first of paraplegia by lesion of the cord that was so soon followed by hemiplegia by lesion of the brain (probably located in the anterior convolutions and frontal sinus).

Amputation.—Dr. Monmonier, in consultation with Dr. Mansfield, saw a man, æt. 72, who had received an injury which exposed the wrist-joint; condition of the circulation good; valves of the heart healthy, no ossification of the arteries. Applied Esmarch's bandage, administered chloroform and made an antero-posterior flap amputation of arm. The stump healed by the first intention. In advanced age, when the circulation is deficient, the application of the elastic bandage may not always be followed by return of the blood.

NEW YORK MEDICO-LEGAL SOCIETY.

Nov. 30, 1875.—After Mr. Clark Bell had finished his valedictory as President (which was chiefly of interest to the Society), Dr. Frank H. Hamilton, the President-elect, delivered as his inaugural an address on

The Effect of the Loss of Consciousness upon the Memory of Preceding Events.—Some years ago he was consulted by a lawyer of considerable experience in criminal jurisprudence in relation to the following case: A woman occupying apartments in a tenement house charged that she had been assaulted in the night while in bed by a man wearing a mask; that during the struggle which ensued, the man had struck her with a club upon the head, rendering her insensible; and that she remained in this condition until morning, when consciousness having returned, she called in some one who was passing by. She was found with her clothes on, lying upon the outside of the bed, and with a wound accompanied with considerable swelling upon her forehead; she stated how she had been assaulted, declared that she had recognized the man, and upon her statement the client was soon arrested. Dr. H. gave it as his opinion that if she was insensible during several hours following the receipt of the injury, her testimony as to what transpired immediately preceding the unconsciousness ought not to be allowed much weight; and that the fact that she

claimed to be able to recall all the events up to the final blow so distinctly, furnished, to say the least, some ground for suspicion that it was all a fraud. Subsequently it was ascertained that this woman, who had borne a doubtful reputation among her neighbors, had been found drunk in the streets on the night of the assault, and that another woman had lifted her up and conducted her as far as the door of her house. The case was dropped; but the Doctor's attention was called to the value of the testimony given under such circumstances; and from that time until the present he has continued to make and record occasional observations upon the subject, as opportunities have been offered.

South, in his notes of Chelius' Surgery, mentions a case in which a surgeon, finding a woman in a comatose condition, suspected that it was due to extravasation of blood, and applied the trephine, when upon the escape of the imprisoned blood the woman recovered her senses promptly "and was able to give a clear account of the manner the accident occurred." In this case there was no failure of the memory, but this is not always the case. Indeed, in a case under his own observation, very similar to the above, the patient having been blown up in a steamboat explosion, causing a fracture of the skull and rupture of the middle meningeal artery, an incision of the dura mater brought relief and restored consciousness; but although his recovery was complete, he was never able to recall any incident connected with the disaster, or any event of the day on which the accident occurred.

His experience has also led him to regard as apochyphal those stories which are now and then related of persons who, struck with sudden loss of consciousness while speaking, have, upon sudden restoration of consciousness after the lapse of many hours or days, proceeded to finished the broken sentence, or have taken up the thread of thought as if no interruption had occurred. When unconsciousness had been transient, he thinks he has seen this phenomenon, but not when it has been prolonged. It is apparent that the questions which this subject opens as to the admissibility of the patient's testimony under these conditions have a very wide application; and that if possible they ought to be determined by a reference to carefully observed facts.

Complete or temporary unconsciousness may be occasioned by a blow upon the head, causing concussion of the brain; by compression of the brain ensuing upon the fracture of the skull with depression of the fragments; by extravasation of blood within the skull; by embolism of the cerebral artery; by syncope; by polypus; by the inhalation of anæsthetics; by alcoholic inebria

tion, which is only a form of anæsthesia; by the use of opiates and other narcotics; and perhaps by many other causes. Even sleep, a natural event, which occurs without any positive cerebral disturbance, may possibly at times cause a break or failure in the memory. At all events, it is a proper question for consideration. In a large number of cases, however, which come under the observation of the medical jurist, insensibility will be found to be due to concussion, or compression of the brain, caused by blows inflicted upon the head, or by shock incident to railroad or other serious accidents; and it is quite probable that the laws which govern the recollection of preceding events will be found, upon thorough examination, to vary according to the loss of consciousness, and may be due to one or the other of the many causes above enumerated.

Dr. H's conclusions, drawn from the study of a large number of cases, are, 1st. A temporary loss of consciousness does, in many cases, impair the recollection of events immediately preceding. 2d. In some cases it does not. 3d. Impairment of memory caused by loss of consciousness is of two kinds: (*a*) Complete abolition of memory dating from a period of time, or an event, which the patient can definitely name; and (*b*) an event may be remembered up to the moment of the receipt of the injury, but with a degree of confusion and uncertainty. 4th. In the case of sudden and complete obliteration of memory dating from a period preceding the injury, the length of this period will, in general, have relation to the degree and length of the insensibility. If the patient is unconscious but a few moments, or if the loss of consciousness is only partial, he may recall events nearly or quite to the moment of the receipt of the injury. If, on the other hand, the loss of consciousness is complete, amounting to coma, and prolonged, it is probable that he will have forgotten events for some time preceding the injury.

In reference to that class of cases, in which the memory of events is retained up to the moment of the accession of unconsciousness, but in which the memory is confused and uncertain, it may be observed that they are likely to be of the most importance in a medico-legal point of view. Those who have forgotten completely preceding events will make no statement in relation to those events unless they fully intend to swear falsely and to practice a fraud; and we may hope that the number of persons who will thus wilfully perjure themselves is not large. But the other class of persons may testify honestly and yet very erroneously—their memory of preceding events being in part correct, and in part false. There may be just enough truth in their statements to give a color, and to induce the Court to accept of

the whole without qualification or abatement. Under these circumstances the witness will unintentionally put language into the mouth of one which was uttered by another. He may transpose the order of events, or in many other ways deviate from the exact truth without knowing that he does so. He may even mistake the visions which flit through his mind while unconscious of facts; or what is more likely to happen, he may receive from the conversations of those who are about him, when consciousness is returning, impressions as to what happened before the accident which will assume the character of convictions, and will be eventually regarded by him as having been recalled by an act of his own memory.

In conclusion, the speaker exhorted those who undertake investigations similar to these to exercise great care, rejecting all cases who were intoxicated before the receipt of an injury, or who were not sufficiently intelligent or honest to be trusted in their statements, or who had not completely recovered their intelligence since the receipt of their injury. The investigations should be close and critical.

MOBILE MEDICAL SOCIETY.

(Reported by W. D. Bizzell, M. D.)

Sept. 18, 1875.—**Traumatic Abscess of the Neck Opening into the Pleural Cavity—Death.**—Dr. Fournier reported the following case: Patient came into the City Hospital some six months ago with acute rheumatism. After several months he was convalescent, and complained only of occasional pain in the back and side, about the lower border of the trapezius muscle. He had, however, gradually recovered from this, and was arranging to leave the hospital in a few days to resume his duty as sailor, when he had an altercation with another convalescent. In the melee he received two stabs with a pocket knife—one in the hip, slight, and the other in the left side of the neck, extending down and in the direction of the angle of the first rib. There was considerable hemorrhage, though the Doctor ascertained on his arrival that no large blood vessel had been injured. The man was able to be up and walk around for several days after the accident. Then a high grade of inflammation set up in the wound of the neck, attended with intense febrile reaction. Applied a poultice to the wound. Complained of the most intense pain in the region of the base of the heart, at the third intercostal space. Large doses of opium, combined with chloral and bromide of potassium, failed to alleviate the pain or procure sleep. Dr. F. was somewhat at a loss to account for this pain.

Could it be the old rheumatic diathesis now concentrating its destructive energy on the heart? All the physical and rational signs seemed to negative this proposition, and he was unable to tell exactly what was the trouble, when death on the tenth day carried off his patient.

Post Mortem.—Laid open the cervical wound by a crucial incision. Evidences of an intense inflammation of the wounded part were apparent. There was some pus, and considerable caries of the third rib about the angle against which the knife, in descending, had impinged. There was evidence that here there had been a considerable quantity of pus. Laying open the pleural cavity in front, no unusual appearance was noted; but on raising up the lung, the posterior aspect of the pleura was seen to be smeared with a considerable quantity of pus. The question was, Where did the pus come from? Did it come from the emptying of an abscess of the inflamed area above? On very close examination, a minute opening was discovered in the upper portion of the pleural cavity, and by insinuating a probe gently, it traversed a minute canal, and made its appearance in the inflamed and suppurating area above. He was then satisfied that the intense pain was caused by the rapid disintegration of the soft tissues and of the bone that was going on in the neighborhood, as well as the weight of the accumulated pus on the third intercostal nerve.

Hemorrhage into Pleural Cavity—Aspiration—Death.—Dr. Fournier also reported the case of an old, male negro Creole, who had rheumatic and gouty history—chalk stones in nearly every joint. He had been in the hospital for a long time. He began some time since to complain of cough, especially at night, for which the Doctor gave a stimulating cough mixture, and did not pay much attention to it. But the man got no better; the cough became more troublesome and complicated, with great dyspnœa, so much so that it was almost impossible for him to lie down at all. A careful examination showed complete dullness on percussion over the whole of the region of the left lung, with considerable distension of that side of the chest, attended with bulging of the intercostal spaces. The absolute flatness on percussion, the urgency of the dyspnœa, and, indeed, of all the symptoms, pointed to accumulation of fluid in the pleural sac of the right side. Dr. F. passed the needle of an aspirator between the seventh and eighth ribs posteriorly, but was astonished to see a bright crimson stream of apparently pure blood flow into the exhausted receiver. After nearly two pints of this fluid had been drawn, he thought it best to desist, and see what effect its removal would have on the patient. The removed

fluid coagulated promptly, and was with difficulty extracted through the narrow neck of the receiver. The effect on the patient was most beneficial; he could lie down, and breathe freely, and the improvement in this respect has been permanent. The respiratory murmur has returned to the upper portion of the lung, and the dullness is not nearly so markod. Dr. F. remarked that Dr. Bowditch, in his article on *Paracentesis Thoracis* (who is most excellent authority), says that when blood only flows from the distended pleural cavity, the trouble will be found to originate in, and be due to, malignant disease. As yet, Dr. F. could not say whether or not this would prove true in the case reported.

(N. B.—This patient died on the —th December. At the *post mortem*, Dr. Fournier saw, on opening the thorax, no evidence of malignant disease. The man had remained free from dyspnœa since the tapping, and there had been no accumulation of fluid. The left lung was very much retracted, and bound down in the upper part of the thorax by bands of lymph; the walls of the pleural sac were covered with more or less purulent matter, not in any great abundance, however. Dr. Fournier thinks the accumulation of blood in the pleural sac was due to a rupture, followed by hemorrhage, from some of the small blood vessels of the part, the walls of which, in such a subject, we would suspect of having already undergone atheromatous degeneration. The fluid, once removed, did not again accumulate. *Note by Reporter.*)

Persistent Headache due to Dilatation by Hypertrophy of the Heart.—Dr. W. D. Bizzell reported the following: Patient, a negro man about 50 years of age, commenced to complain of intense headache about eight months since. A number of remedies were tried, but none gave entire relief. The head ached more or less in the day, but at night, and when he assumed the recumbent position, it was far worse. Tried large doses of quinine without effect; bromide and iodide of potassium, in full doses, did some good, but did not give entire relief. About six months ago, attention was called to rusty colored, bloody sputa, and to the fact that the man could not maintain the recumbent position, and could only sleep in the half-sitting posture; headache still continued. An examination of the heart showed a loud mitral murmur, with hypertrophy and considerable dilatation of the heart. Prescribed tinct. ferri chlor., combined with digitalis. Under this treatment, the *headache* disappeared almost entirely for awhile, together with all the other distressing symptoms; but eventually the remedy seemed to lose its effect; the distressing symptoms returned, together with a large accu-

mulation of water in the lower extremities—scrotum and penis —and he died rather suddenly some two weeks since.

Post mortem a few hours after death. Contents of thorax only examined. The heart showed scarcely a trace of the mi tral valves, and the corresponding side of the heart had undergone hypertrophic dilatation. The right side was enormously dilated—the walls of the auricle being almost as thin as paper. The vena cava ascendens and descendens were both very considerably dilated, and their walls very much thinned. About four inches below the heart, in the cava ascendens, there was a rent, and through this a considerable quantity of blood had been poured out; this, no doubt, was the immediate cause of death. The cause, then, of the intense cephalalgia, which, in the early history, had been so obscure, was now perfectly plain. The engorgement of the right side of the heart and of the corresponding venous circulation, which, as we have seen, was sufficiently severe to cause congestion of lungs and hæmoptysis, in like manner, would produce passive congestion of the brain—all the sinuses and veins being continuously full to repletion, sufficient to excite the intense pain complained of.

Sept. 25.—**Blood-letting as a Therapeutic Measure.**—Dr. Fournier said that a little over a century ago blood-letting was universally practised for almost every conceivable malady; but about a score or more of years since the practice was gradually abandoned, until so complete was the abandonment that there are now medical men of large practice and many years experience, who have not only never performed venesection themselves, but have never seen it done in their lives. That this aversion to the abstraction of blood on the part of the profession had, in some cases, been prejudicial to the patient, Dr. F. did not doubt, for under certain circumstances he believed it was not only justifiable, but indispensable. But what caused the profession to drop the practice of venesection? Was it a change in the type of diseases? This he did not believe. The true cause, in his opinion, was the rational study of the natural history of diseases when left to themselves, which researches the profession instituted about this time and have continued wonderfully, extending the domain of medicine, and placing it more and more in line with the exact sciences. It was no wonder, then, that when they became fully impressed with a knowledge of the immense damage capable of being inflicted by an improper use of this remedy, and when they recognized how often it had been and was being thus used, that a halt should be called by the leaders of medical opinion. We must remember a fact that was lost sight of by most of the old phlebotomists, viz., that we do

not abstract blood because the patient is suffering from any particular malady, but for the relief of certain conditions that arise in the course of any disease—obstructions either of circulation or respiration. Venesection is a purely mechanical measure, and is invaluable in certain cases of overwhelming congestion of either brain or lungs. The brain may be overcome by active or passive engorgement, and it is for the relief of this engorgement of the capillaries and abatement of the intense blood pressure, that we have recourse to venesection. If there has been already a rupture of one of the cerebral blood vessels, Dr. F. does not think venesection can do any good. Even in inflammations, in the treatment of which venesection had figured so largely, we rarely hear of its employment, for it has been abundantly proven that in this class of diseases, not only will the far larger proportion recover without the performance of venesection, but will do so far more safely and speedily than if it had been performed, though it is true that during the first or congestive stages of inflammation—pneumonia for example—blood-letting may sometimes do good, and may, in fact, prevent the occurrence of inflammation. Also, in pulmonary apoplexy, where the lungs are overwhelmed with the afflux of blood, and when asphyxia is impending, venesection meets the indications and relieves the patient more promptly and efficiently than any other measure—though in milder cases wet cups to the chest answers every purpose. In puerperal convulsions we have a determination of blood to the brain, which determination may be so intense as to fearfully jeopardize the patient's life. The physician should not here stop to determine whether his patient is plethoric or not; even if the patient was below par in the quantity or the quality of the blood, to equalize the circulation and to bridge over the crisis he would not hesitate to use the lancet freely, trusting that afterwards, by the use of proper medical and hygienic treatment, to more than make good the loss. While, then, general blood-letting is not to be thought of in connection with many of the diseases for which it was formerly used, there can be no doubt that in certain conditions or crises it is, by its mechanical effect, capable not only of great good, but in some cases may save life.

Dr. E. R. Gaines said that he commenced the practice of medicine more than a quarter of a century ago, consequently he began his professional career at a time when venesection was largely practised by the profession, and, he was free to confess, was followed by the best results, as observed both in his own practice and that of his *confreres*. But this state of affairs did not last long. He soon noticed that general blood-letting was

not followed by such success as had hitherto attended it; in other words, it had been his fortune to witness with his own eyes that change in the type of disease which has been strenuously denied. He said that Dr. Samuel Henry Dickson, in his writings, claims to have witnessed the same change, and, not to speak of foreign authorities, such as Sir Wm. Jenner and others, Flint and others of our American teachers hold to this doctrine. In that celebrated discussion before the Medical Society of the county of New York, Dr. Flint predicts that like the swaying of a pendulum the type of disease will again recur to the sthenic condition, and that such change was already being felt in a minor degree. Dr. Gaines believed this to be true. He then related some cases of pneumonia that had occurred in his practice, showing in a striking manner the good effects that may follow venesection; also a case of sunstroke occurring in a gentleman who had ridden from the city, in the heat of the day, two or three miles into the country; his face was flushed, his carotids pulsating violently, and he complained of an unbearable pain in the head. He opened a vein of his arm, and as soon as the blood began to flow he expressed himself as feeling better, and was soon relieved. Flint mentions two kinds of insolation—one dependent on intense cerebral congestion, the other due to a prostration or giving way of the entire nervous system. The latter, of course, demands entirely different treatment from the former. While, then, Dr. Gaines could not agree with Dr. Fournier that no change had occurred in the type of disease, he was glad to hear that gentleman assert the absolute necessity for venesection in the treatment of some cases.

RICHMOND ACADEMY OF MEDICINE.

Dec. 16, 1875.—**Apomorphia—Correction.**—Dr. Robinson used $\frac{1}{12}$ gr. instead of $\frac{1}{4}$ gr., as reported on page 580, December No., 1875.

Election of Officers.—Dr. R. T. Coleman, President. Drs. J. G. Skelton, F. B. Watkins, O. A. Crenshaw, Vice Presidents; Dr. J. C. Deaton, Secretary—Dr. H. H. Levy declining re-election.

Dr. Fairfax exhibited a pathological specimen which he had recently removed—malignant disease of intestine. Incidentally, he called attention to the preservative and disinfectant effect of chloroform, which he had used with this specimen.

Dr. Parker reported a case of obscure brain disease.

Analyses, Selections, &c.

New Treatment and Prophylaxis of Scarlatina—Iodide of Potassium.—Dr. J. P. Walker, of Mason City, Ill. (*Trans. Ill. State Med. Soc.*, 1875), says of iodide of potassium, that it appears to possess the most remarkable powers over the whole course and sequelæ of scarlatina, as well as over many other specific diseases. During 1873 and '4, he, with Drs. J. W. Spear and J. H. Walker, saw over 250 cases of all grades of the disease, of which not one died where the method of treatment was adopted at the outset, and very seldom did they have more than the first fully developed case in the same locality. When called to a child 1 to 5 years old, with the early signs of the disease, Dr. W. at once bathes the whole body in a warm solution of carbonate of soda, and greases the child—head and feet—with old salt bacon grease. Also, ℞. Potas. iodid. ʒj; syr. scillæ, ℥ij; tinct. verat. virid., gtt. iij. M. S. Half teaspoonful, more or less, according to age, every second hour until temperature is greatly abated—the doses to be gradually decreased. At the same time, apply a piece of hot fat salt pork around the throat, from ear to ear—to be taken off, heated and re-applied every 3 or 4 hours. Also, gargle as often as possible equal parts of a saturated solution of common salt, cider vinegar and honey. This practice he has adopted for the past 15 years, without having had a single case of abscess about the throat, or dropsy, when the treatment was early begun and properly continued. But in a few cases, so mild as to require the thermometer to detect fever, the treatment was discontinued in spite of his opposition, and general anasarca ensued; but this yielded readily to iodide of potassium and squills, with chalybeate and vegetable tonics.

While the above treatment is being carried out, Dr. W. orders every one in the family exposed to the disease to take, according to age, grains iij to xx of iodide of potassium daily until the desquamation is completed in those cases where the rash has appeared. This he has found to act excellently as a prophylactic.

Inflation of Lungs in Case of Suspended Animation.—Dr. J. O. Hamilton, of Jerseyville, relates the following case (*Trans. Illinois Med. Soc.*, 1875): A child was delivered (Feb., 1875,) by forceps. After ligation of the funis, the child was dead to all appearances. The usual methods advised for resuscitation

were used for 15 minutes without effect. The child was then placed on its left side on a pillow, and one end of an India rubber tube (about 2 feet long, and $\frac{3}{16}$ inch in diameter) was placed in its mouth, which was closed on the tube; the nostrils were also closed; the other end of the tube the Doctor took in his mouth. Through it he forced air from his own lungs into those of the child. Releasing compression of the child's nostrils, the air was allowed to escape. This operation was repeated for 30 minutes—45 minutes after the birth—when a very small pulsation was detected in a small hepatic branch from the umbilicus; but no heart contractions were perceptible. The artificial respiration was continued for 10 minutes longer, when heart beats became perceptible; but on suspending the artificial respiration for 2 minutes, the pulsations ceased entirely. The process of inflation was resumed, when the heart beats returned. The inflation was again discontinued at the end of 10 minutes, when slight motion of the alæ of the nose were observed, and the child took a short, quick inspiration, the diaphragm entering into the effort. But in a few moments the lungs ceased to fill, and the heart beats were growing fainter. Artificial inflation was resumed, with a like happy result. The inflation process was continued for 15 minutes, when the currents of an electric battery were applied to the spine and diaphragm, frequently varying the position of the poles; in a short time, healthy respiration was permanently established. The Doctor labored in this case more than $1\frac{3}{4}$ hours before a safe respiration was established.

Book Notices, &c.

Medical and Surgical Memoirs. Containing Investigations on the Geographical Distribution, Causes, Nature, Relations and Treatment of Various Diseases. 1855–1876. By JOSEPH JONES, M. D., Professor of Chemistry and Clinical Medicine, Med. Dept. University of Louisiana; Honorary Fellow Med. Society of Va.; etc. Vol. I. New Orleans: Printed for the Author, 1876. 8vo. Pp. 820—xvii. Price $5.50. (From the Author).

This is the first volume of the long promised "Memoirs," and it is certainly a remarkable work. It evinces an amount of original investigation, patient and laborious research, and careful and accurate study that but few authors are capable of bestowing individually upon any series of so vast a scope.

In evidence of the untiring industry of the author, and as an

illustration of the completeness of his labors, it may be mentioned that 800 clinical cases are reported—many of them given in detail—all of which are thoroughly analyzed and classified under appropriate chapters; also 400 (mostly original) physiological experiments are recorded, beside 95 distinct analyses of urine; 60 tables illustrating the symptoms, and the mortality of diseases under different modes of treatment, and in different climates, are also given. These tables, carefully compiled, form of themselves an almost distinctive feature of the work, and are eminently serviceable. The work, therefore, is exceedingly valuable for reference as well as for study.

Besides this, these "Memoirs" have a historical value. No other work attempts to collect and systematize the experience and investigations of the Confederate Army surgeons and physicians, whose labors in behalf of medical science have been too much overlooked because unrecorded. No one in the Confederacy had better opportunities to perform this duty than Dr. Jones, who was officially detailed by Surgeon General Moore to investigate a number of the subjects treated in the work before us. Indeed, the author had prepared a manuscript volume of 1,500 pages containing his reports, which were burned at the time of the evacuation of Richmond. In the present "Memoirs" he has attempted to reproduce those portions of his labors which have appeared to him of chief interest in connection with the subjects investigated.

Because of the crowded condition of our book-notice department in this issue, we cannot attempt a review of any of the author's deductions. The opening chapter, covering 137 pages, is a distinct monograph, titled "Introduction to the Study of Diseases of the Nervous System," which is designed as an aid in the prosecution of original examinations on the physiology and pathology of the nervous system.

Chapters ii, iii, iv and v, occupying 266 pages, detail "investigations on the nature, causes, relations and treatment of *Traumatic Tetanus*, illustrated by observations on various diseases of the nervous system, and by experiments on living animals with certain poisons." These chapters on Tetanus, we must say, constitute the most complete and satisfactory monograph on the subject in hand that we have anywhere seen. After a careful review on the part of the author of most of the various remedial agents which have been used and recommended, he concludes that in the present stage of medical knowledge the highest places must be assigned, as therapeutical agents, to chloral hydrate, calabar bean, chloroform, sulphuric ether, cannabis Indica, tobacco, bromide of potassium and opium. The applica-

tion of ice poultices to the spine also promises to be useful. Regarding woorara, he cautions the reader that "without the greatest precaution, the remedy will prove more dangerous than the disease."

Pages 411–553 are taken up with "Observations on *Cerebro-Spinal Meningitis*, and more especially as it appeared among the soldiers of the Confederate States Army during the war." This is a peculiarly interesting chapter. The sudden termination of the war, we are told, found the author's investigations upon this disease in an unfinished state. It is not necessary for us to speak more at length of this division, as we have elsewhere (*Trans. Med. Soc. Va.*, 1873, pp. 29–31, stated our opinion—the result of subsequent study and observation not tending to impair materially any of the deductions there expressed.

The other divisions of this volume are devoted (1) to clinical observations on the lymphatic and circulatory systems, and of the liver and kidneys, illustrating the relations of *Dropsy* to various diseases; (2) investigations on the prevalence and fatality of *Pneumonia* in the Confederate Army during the war, with practical observations on the relative value of the different modes of treatment; and (3) observations on diseases of the osseous system—*Mollities Ossium*—all of which are alike interesting and valuable.

Of course, there are statements in this volume which are open to criticism; but these are comparatively so few, and they are so far outweighed by the merits of the work—by the value of the historical researches and *experimental* investigations of the author—that, without space at our command to do either the author or ourselves justice, we shall not attempt a review.

These "*Memoirs*" have been published under some embarassments, and at the pecuniary risk of the author, and are sold by subscription. It is to be hoped that subscribers will promptly forward the price to the author, and thus save him from loss. Had the volume before us been printed on the same size page and with the same size type as Watson's *Practice* (Amer. edit., 1858), it would have been a much larger book. Hence it is difficult to see how it is possible for the author to reimburse himself at the small price charged, even were every copy of this edition paid for by subscribers. We hope, however, there will be (as there should be) a demand, certainly on the part of every ex-Confederate medical officer, for every published copy.

Cholera Epidemic of 1873 *in the United States.* War Dept., Surgeon General's Office, Washington, 1875.

This is an octavo of 1053 pp., prepared in compliance with

Congressional instructions to the Supervising Surgeon of the U. S. Marine Hospital Service (Dr. John M. Woodworth), for the purpose of collecting all important facts with regard to the late epidemic in this country.

We find it impossible, in the space at our command, to make any comments on this report which, though excellent and valuable as a whole, contains some deductions which are at least debatable.

The Introductory (28 pages), prepared by Dr. Woodworth himself, relate to the *Introduction of Epidemic Cholera into the United States through the Agency of the Mercantile Marine*, with *Suggestions of Measures of Prevention*—the latter suggesting principally the establishment of proper quarantines, and the thorough exposure of all goods to acids before landing from infected ports, &c.

The first part gives the *History of the Cholera Epidemic of* 1873 *in the U. S.*, which is prepared by Asst. Surg. Ely McClellan, M. D. This gives with great minuteness (1) the clinical history of the epidemic; (2) the etiology of the epidemic; and (3) the prevention of cholera. Chapter IV, by Dr. John C. Peters, of New York, on the *Origin and Spread of Asiatic Cholera which Reached the U. S. in* 1873, gives an exceedingly interesting account of the disease (with maps) as it prevailed in several parts of the Old World up to 1873. Chapters V–XXII, by Dr. McClellan (?) narrate the course, with dates, of the epidemic in the U. S.—which epidemic infected 264 localities.

Chapters I–III of Part II, by Dr. Peters, gives a *History of Epidemic Cholera up to* 1839, which is undoubtedly the most exhaustive monograph ever published on the early history of the disease. Chap. IV, by Dr. McClellan (?) gives its history in *North America* during 1832–4. Chap. V, prepared jointly, by Drs. Peters and McClellan gives an account of the *Epidemic which Reached the U. S. in* 1848. Chap. VI, by the same authors, relates to the *Epidemic of* 1854 *in U. S.* Chap. VII, by the same, gives an account of the *Epidemic in the U. S. of* 1865–6. To this chapter Dr. J. J. Woodward, Asst. Surg., etc., adds a *Report on the Epidemics of* 1866–7 in the U. S. Army. Chap. VIII, *Cholera in India*, was prepared also by Dr. Peters. To all of this is added a *Bibliography of Cholera*, covering 317 pages (!) prepared by Asst. Surg. John S. Billings.

A Handbook of Punctuation, [pp. 67] by Joseph A. Turner, M. A. Philadelphia: J. B. Lippincott & Co., 1876. (For sale by booksellers.)

This is a timely and valuable treatise on an important topic, which we would be pleased to know was in the hands of every

physician who attempts to write for publication. Prof. Turner is clear in the exposition of principles, and gives practical rules, with examples, in a way that will make the book as attractive as it is instructive. The work was originally prepared for classes in English Literature at Hollins Institute, Virginia, but a larger and appreciative audience will be found in the public.

This Handbook is brief and pointed, as it should be; the most hurried professional or business man will find time to read, and find room on a crowded desk for a book of such value as a reference. Prof. Turner's Handbook will, henceforth, be the authority on the subject of punctuation. L. S. E.

A Practical Treatise on Fractures and Dislocations. By FRANK HASTINGS HAMILTON, A. M., M. D., LL. D., Surgeon to Bellevue Hospital, New York, etc. Fifth Edition—Revised and Improved. Illustrated with 344 wood cuts. Philadelphia: Henry C. Lea, 1875. Pp. 831. (For sale by West, Johnston & Co., Richmond.)

The record of Dr. Hamilton abounds in deeds of kindness to his professional brethren. Yet for no one act, perhaps, is the profession generally more indebted to him than for the presentation of the volume now before us. As every one knows, this is the most complete and reliable work on the subjects of which it treats published in any language—not even excepting Malgaigne's excellent and standard treatise. Hence it would be a waste of time and space further to attempt to convince our readers of its excellences. It may, however, be of interest to note that the views of the author in reference to the subject of shortening as the usual result of fracture of long bones in adults—however skillful the fracture itself may be treated—remain unchanged. On the contrary, he confirms his convictions expressed in the fourth edition with reference to this matter by bringing forward additional testimony (see section on *Prognosis* in cases of fractures of the femur, pp. 408–418). In regard to this subject, Dr. Hamilton undoubtedly gives expression to the actual honest experience of practitioners generally—although there may be some recoveries so perfect as not to leave any *perceptible* shortening even upon measurement. But analyses of such exceptional results seem to show that the recoveries are due rather to what is termed "good luck" than to any improved plan of treatment. Dr. H., however, impresses the fact that it is no evidence of want of shortening simply because a patient, after recovery, walks without a halt. He then lays down the

conditions for a faithful measurement of the thigh, which we quoted in our volume I, page 360.

It remains for us only to add that in every respect this fifth edition has been thoroughly revised, and contains some 50 pages of new matter more than the fourth edition.

A System of Midwifery, including the Diseases of Pregnancy and the Puerperal State. By WM. LEISCHMAN, M. D., Regius Professor Midwifery, Univ. Glasgow, etc. 2d Amer. from 2d Revised English Edition. With Additions by JOHN S. PARRY, M. D., Obstetrician to Philadelphia Hosp., etc. Philadelphia: Henry C. Lea, 1875. Pp. 766. (For sale by West, Johnston & Co., Richmond).

This work, the first edition of which was issued in London scarcely two years ago, has already become so well known and so generally the favorite with practitioners and students as not to require extended notice. The remarkable accuracy, clearness and conciseness with which the author describes any condition or operation, gives the book an additional advantage over that it already has in this country, viz., that it is the only recent systematic work on the subject issued from the American press. As it is fully abreast with every advance in the obstetric art or science, it should be in the hands of every practitioner, while every professor of obstetrics, if he has not already done so, should adopt it at once as his text book.

The chief alterations in this edition will be found in the Physiological section and in chapters on Puerperal fever, which have been rewritten with the view of giving greater prominence to the doctrine of septicæmic infection—including, indeed, the gist of the late discussion before the Obstetrical Society of London. The American editor has added valuable notes on the Use of the Forceps, Lactation, the Puerperal Diseases, and an entire chapter on Diphtheria of Puerperal Wounds; he has, besides, introduced a few new illustrations representing the principal modifications of obstetrical instruments generally employed in this conntry.

Phthisis: Its Morbid Anatomy, Etiology, Symptomatic Events and Complications, Fatality, Prognosis, Treatment and Physical Diagnosis, in a Series of Clinical Studies. By AUSTIN FLINT, M. D., Prof. Principles and Practice of Medicine, and of Clinical Medicine, Bellevue Hospital Med. College, etc. Philadelphia: Henry C. Lea, 1875. Pp. 446. (For sale by West, Johnston & Co., Richmond).

Though this is an entirely new work, containing the record

and analysis of over 670 cases of phthisis, the great distinction of the author in the special field of study which is here reviewed, makes it unnecessary to introduce him to the profession. The volume now presented is one of remarkable interest, and is, in style, even more readable than his other works.

We have not the space to attempt to review this volume—nor, indeed, to give a synopsis of its contents. Instead of this, we must state our opinion of its merits, viz.: that it is eminently practical, exceedingly valuable and instructive, and relating, as it does, to a disease encountered in almost every community, it should be carefully read by every physician. The chapters relating to treatment particularly should be studied. The remedies chiefly recommended are few—cod liver oil, pancreatic emulsion, alcohol in considerable or large quantity [the use of which, *en passant*, by patients as a *therapeutic*—not prophylactic—agent, the author remarks he has never seen abused by patients], proper alimentation, sponging the body daily with cool water, and out door life—recommendations, indeed, which are trite, but the value of which are urged in such a forcible manner by clinical observation as to impart new confidence in them. The author's experience in regard to change of climate, &c., are so rational, and accord so exactly with the experience of those who have been contributors to our journal on the subject, that it is unnecessary to detail it.

A Treatise on Human Physiology. By JOHN C. DALTON, M. D., Prof. Physiology and Hygiene, College of Physicians and Surgeons of New. York, etc. Sixth edition, Revised and enlarged, with 316 Illustrations. Philadelphia: Henry C. Lea, 1875. Pp. 825–xxiii. (For sale by West, Johnston & Co., Richmond).

It is only necessary to announce that this thoroughly revised edition is just out; for every one concedes that it is the best physiological text book published in America. The new chemical notation and nomenclature are used in this edition—these having now superseded the old so generally as to require this change; and we are glad, too, to see that the centigrade systems of measurements and temperature are adopted. The author claims an increase of fully fifty per cent. in the matter of the work over previous editions, notwithstanding his efforts to condense it. The most important changes in the text of this edition will be found in the chapters on Physiological Chemistry and on the Nervous System—the rapid growth of physiological knowledge on these subjects especially having compelled their being almost entirely rewritten.

A Treatise on Human Physiology. By AUSTIN FLINT, Jr., Prof. Physiology and Physiological Anatomy, Bellevue Hosp. Med. College, New York, etc. Illustrated by 3 lithographic plates and 313 wood cuts. New York: D. Appleton & Co., 1876. Pp. 978–xviii, large octavo. (For sale by Woodhouse & Parham, Richmond).

This is chiefly a condensation of the author's well known five volumes on *Physiology of Man*, and is designed to meet the wants of practitioners and students of medicine. In the present work, bibliographical citations and matters of purely historical interest are omitted. Numerous accurate drawings have, however, been introduced, which add materially to the interest and instructiveness of the work. The latest advances in physiological investigation are also noted. In short, although perhaps still too bulkly for a college student's text book, so long as medical college sessions last about four and a half months instead of eight or nine months, this treatise is first-rate, and should be in the hands of every practitioner, who, because of the greater cost of the five volumes of *Physiology of Man*, is unable to own them.

Transactions of the Medical and Chirurgical Faculty of Maryland, at its Seventy-seventh Annual Session. Held at Baltimore, April 13–16, 1875. Dr. JOHN F. MONMONIER, *President;* Dr. WM. G. REGESTER, Baltimore, *Secretary.* Pp. 226.

Transactions of the Twenty-second Annual Meeting of the Medical Society of the State of North Carolina. Held at Wilson, May 18–20, 1875. Dr. PETER E. HINES, Raleigh, *President;* Dr. JAMES MCKEE, Raleigh, *Secretary.* Pp. 127.

We regret that the notices which have been prepared of these volumes of Transactions are again crowded out. Our readers, however, have less ground for complaint at this, since quite full reports of the proceedings of each of the Societies above named were given in our May and June numbers respectively.

Hints in the Obstetric Procedure. By WM. B. ATKINSON, M. D., Phys. to Dept. of Obstetrics, etc., Howard Hospital, Philadelphia, 1875.

This is a 16mo. volume of 89 pages, published by the author "to supply an almost constant demand" upon him for copies of his Annual Address, delivered before the County Medical Society. It is quite readable, though it contains nothing new.

Transactions of the American Medical Association. Vol. 26, 1875, held at Louisville, Ky. pp. 577.

We have already given a synopsis of the proceedings of this session. An unfortunate typographical error occurs on the first page. Dr. W. K. Bowling, the ex-President, is not from Texas, but Tennessee.

The following have been received, which we regret not having space to notice further at this time:

Transactions of the Medical Society of the State of Pennsylvania. 26th Session. Held at Pottsville, Pa., June, 1875.

Transactions of 25th Meeting of the Illinois State Medical Society. 28th Session. Held in Madison, June, 1875.

Transactions of the New Hampshire Medical Society 85th Session. Held at Concord, June, 1875.

Transactions of the Kentucky State Medical Society. 20th Session. Held at Henderson, April, 1875.

Sanitary Condition of Boston. The Report of a Medical Commission, 1875.

Chinatology and Sanitary Report of Florida. By JOHN P. WALL, M. D., Tampa. (Reprint from Trans. Amer. Med. Ass'n, 1875).

Report of Section on Obstetrics and Gynæcology. By WM. T. HOWARD, M. D. (Reprint from Trans. Med. and Chirurg. Fac., Md., 1875).

Conlribution to the Medical History and Physical Geography of Maryland. Annual Oration before the Med. and Chirurg. Faculty of Md., 1875. By JOSEPH M. TOWER, M. D., of Washington, D. C. (Reprint from Society's Transactions, 1875).

Treatment of Paralysed Muscles by Elastic Relaxation. By JOHN P. VAN BIBBER, M. D. (Reprint from Trans. Med. and Chirurg. Fac., Md., 1875).

Contagium Particles of Eruptive Contagious Fevers. By I. E. ATKINSON, M. D. (Reprint ditto).

Trinitus Aurium. By SAM'L THEOBALD. (Reprint ditto).

Alimentation and the Gastro-Intestinal Disorders of Infants and Young Children. By B. F. DAWSON, M. D. (Reprint).

Abortion—Causes and Treatment. By WALTER COLES, M. D., St. Louis, Mo., 1875.

State Medicine and its Relations to Insanity. DR. NATHAN ALLEN, Lowell, Mass.

Address before Med. Association of Alabama. By Dr. J. S. Weatherly, President. (Reprint from Society's Transactions, 1875).

Climate of U. S. with Reference to Pneumonia and Consumption. By W. D. Bizzell, M. D., Mobile, Ala. (Reprint ditto).

Extension Windlass. Adapted for Treatment of Fracture of Patella; for making Extension of Joints; for treatment in Certain Difficult Fractures; and as a Tourniquet. By Charles Denison, M. D., Denver, Colorado. (Reprint from N. Y. Med. Jour.)

Fracture of Inferior Maxillary Bone. By Jos. F. Montgomery, Sacramento, Cal. (Reprint).

Relations of Nervous System to Diseases of the Skin. By L. Duncan Bulkley, A. M., M. D., N. Y. (Reprint.)

Normal Movements of Unimpregnated Uterus. By E. Van de Warker, M. D., Syracuse, N. Y. (Reprint).

Memoir of W. H. McKee, M. D., late of Raleigh. By Drs. S. S. Satchwell and Wm. G. Hill, N. C. Published by the Society, 1875.

Catalogues of Henry Kempton, Bookseller &c., London, Eng.

Editorial.

POLITICS IN MEDICAL APPOINTMENTS.

The steps recently taken by the Governor of Virginia to secure the removal of Dr. D. R. Brower from the Superintendency of the Eastern (Va.) Lunatic Asylum, should not be passed by without notice. It has been the result of a narrow, contracted, political view, which, if persisted in, will inevitably bring disgrace upon the State. It will subsidize all the positions of honor and professional eminence to the trickery and caprices of an ever vascillating political opinion; until finally, there would be found in all the places which should be filled by men of special merit, only those who are the most successful tricksters.

No one in the State can be more thoroughly identified with the principles of the Conservative political party, as at present found in Virginia, than are we in our personal relations to society. But the subject of professional appointments is not one to be remitted to the decision of a political party as such. Next

to the interference of the State with the affairs of the Church, we know of scarcely anything that should be more emphatically denounced than the interference of the State with existing medical appointments, *on merely political grounds.*

It has been stated by the friends of the Gubernatorial administration that Dr. Brower came to Virginia immediately after the war in the employ of the Freedman's Bureau, and that he was originally appointed by the U. S. military authorities to take charge of the Eastern Lunatic Asylum, at Williamsburg, after the death of the former Superintendent, Dr. Petticolas—some seven or eight years ago. When, however, Virginians themselves came to control the affairs of their State, at a later period, the Board of Directors then appointed for the Eastern Lunatic Asylum—composed of as truly representative Virginians as the State could supply—were so well pleased with the management of the Institution and the medical care taken of the inmates, as also with the results of the plans of medical treatment which had been pursued, that they refused to make any other appointment—content, as they were, to let well enough alone. In fact, with each successive annual meeting, the Board was more and more pleased with the administration of Dr. Brower, and as regularly elected him to the position of Superintendent. In short, during his term of office, the Asylum has been transformed from what it was—the dread of the friends of the unfortunate lunatics all over the State—into an institution which is now eagerly sought. Even with all the cost of the additions made to the buildings, &c., the expense *per capita* has been moderate; no complaint of malfeasance in office can be substantiated, nor even entertained for a moment in the minds of impartial parties. No charge of inattention to the patients has ever been brought against him; on the contrary, it seems to be the unanimous testimony that he is kind, and thoughtful as to the wants of his patients. Besides, the compliments that have been paid Dr. Brower by no less an authority than the late Dr. Francis T. Stribling, as well as by some of the eminent medical gentlemen composing the late Board, leave no ground for the charge of medical incompetency. No charge of dishonesty has been alleged against him, nor has he been charged with officious intermeddling with politics during his term of office.

That complaints have been brought against Dr. Brower by some of his personal or political enemies is not to be denied. But they were, in each instance, scrutinizingly investigated, both by the Board of Directors and the Committees from the General Assembly (both of which have always had since the war a controlling Conservative majority.) In fact, when the Board of Directors, a year or so ago, proposed to examine into the general charges, witnesses could not be procured. But, notwithstanding all this, the Governor, it is said, became determined to displace Dr. Brower. Hence, it is further stated, that in selecting the new Board of Directors, he purposely selected a majority whose known personal views would inevitably lead to his displacement.

We have no word of complaint to make against any of the present Board of Directors—appointed, as they were, by the Governor. Indeed, since the Board saw fit to remove Dr. Brower, they deserve special commendation for selecting so excellent and well qualified a gentleman and physician as Dr. Harvey Black, of Blacksburg, Va.; for we do not hesitate to say that, as an original appointment, a happier selection could not have been made for the delicate and responsible position. Dr. Black has no superior, and but few equals in the general qualifications fitting him for this post of duty. In a word, he possesses all the qualifications of head and heart, of education and experience, pre-eminently fitting him for this office, and we are glad to know that he has consented to serve. But in congratulating our distinguished friend upon receiving (unexpectedly to himself) so marked a testimonial of professional confidence and personal esteem, we should not allow our personal admiration for the character of the one to lead us to do injustice to the other.

But it is not our purpose to discuss the immediate results which possibly may follow in the case before us. It is the *principle* upon which Gov. Kemper acted in causing the displacement of Dr. Brower that engages our attention. This principle is apparently based upon party politics; and if so, it is wrong. What special gift or intuition has Gov. Kemper, whose whole attention has been given to other matters, to decide regarding medical professional qualifications in opposition to the decision made by

a body of educated, representative medical men—such as were on the former Board of Medical Directors?

Were there a vacancy in any of the public institutions of the State, and if two men of equal culture and ability were candidates to fill it—one a Virginian by birth or adoption, and the other a mere "floater on the surface of events"—of course it would not require a moment to decide which of the two should be selected. Hence, had a Virginian been originally selected instead of Dr. Brower, we would have applauded the action. But when he has been allowed to remain in position for so many years, all the time giving satisfaction to those competent to judge of his labors, and when he has made himself proficient by persevering study and experience, until at last he has come up to the first rank of alienists in the country, his summary and arbitrary removal, in effect, by the Governor, must operate to the prejudice of the State, to the damage of science, and have the effect to deter men of special qualifications from selecting Virginia as their residence. Such a policy will also deter Virginians themselves from attempting to prepare themselves for special scientific positions, with which partisan politics may interfere.

The true policy of any State or community in reference to scientific and professional men, is to retain them in position so long as they give evidence of progressive study, and of profiting by experience, and even to import such men whenever needed, if they cannot be found at home. Science knows no politics and no section.

VIRGINIA MEDICAL LEGISLATION.

During the present month, the Committee appointed by the Medical Society of Virginia at its recent session* to secure legislation regarding the establishment of a State Board of Medical Examiners, an appropriation to enable the State Board of Health to become effective, and a law to enable physicians to collect the amounts of their just bills for medical services rendered, will make an earnest effort to accomplish the object of

*By an accidental omission, the names of the gentlemen composing this committee were not given at the proper place in the printed Transactions (page 120, line 5). They are Drs. G. Wm. Semple, M. M. Walker, Henry Latham, B. Blackford, T. D. Stokes, J. B. McCaw, J. S. Davis, Wm. Selden, W. F. Barr and J. E. Chancellor.

their appointment. We are glad to learn that from the incidental conversations which members of the Committee and others have had with the representative men in the General Assembly, there is ground to hope for at least a measure of success. The Chairman of the Committee himself, prompted alone by the motive of doing good to others—even at the sacrifice of personal interests at home—will spend a few days in Richmond in order the more efficiently to secure the adoption of the proposed measures. In view of this commendable example, and the nature of the objects in view, will there prove to be a regular physician in Virginia who will not at once renew his determination to assist, and at the same time put forth all his energy and effort to secure the desired legislation? Let every one in person or by letter at once communicate with his county or city representatives, explain the nature of the proposed laws, and use such arguments as may seem most forcible to convince them of the propriety and necessity. We cheerfully commit ourselves to the task.

We are sure that our subscribers in other States will not complain of the space we occupy in reference to Virginia affairs, for they must appreciate the importance to themselves of any favorable action taken by Virginia in regard to the matters spoken of.

International Medical Congress.—The Centennial Medical Commission, composed of delegates from the Medical Societies of Philadelphia, with Dr. S. D. Gross, President, and Drs. D. G. Brinton and Wm. Goodell, American Corresponding Secretaries, are actively engaged in making preparations for the meeting of the International Medical Congress in Philadelphia, to begin at noon on Monday, the 4th, and to terminate on the 9th of September, 1876. The Commission propose the following general plan for organization, etc.:

I. The Congress shall consist of delegates, American and foreign, the former representing the American Medical Association and the State and Territorial Medical Societies; the latter the principal medical societies of other countries.

II. The officers shall consist of a President, ten Vice Presidents, four Secretaries, a Treasurer, and a Committee of Publication, to be elected by the Congress at its first session, on the report of a Committee on Nomination.

III. The morning sessions shall be devoted to general business and the reading of discourses; the afternoons to the meetings of the Sections, viz: 1. Medicine, including Pathology, Pathological Anatomy and Therapeutics. 2. Biology, including

Anatomy, Histology, Physiology and Microscopy. 3. Surgery. 4. Dermatology and Syphilology. 5. Obstetrics and Diseases of Women and Children. 6. Chemistry, Toxicology and Medical Jurisbrudence. 7. Sanitary Science, including Hygiene and Medical Statistics. 8. Ophthalmology and Otology. 9. Mental Diseases.

IV. The language of the Congress shall be the English, but not to the exclusion of any other language in which members may be able to express themselves more fluently.

Gentlemen intending to make communications will please notify the Commission at the earliest practicable date, in order that places may be assigned them.

The registration book will be open daily from August 31 from 12 to 3 P. M., in the Hall of the College of Physicians, N. E. corner 13th and Locust streets. Credentials must in every case be presented.

There is every reason to believe that there will be ample hotel accommodation for all strangers visiting Philadelphia in 1876. Further information may be obtained by addressing the Corresponding Secretaries.

The Executive Committee for the States are: Drs. W. O. Baldwin, C. H. Mastin, Ala.; Henry Gibbons, T. M. Logan, Calif.; W. R. Whitehead, Col.; S. G. Hubbard, C. L. Ives, I. G. Porter, Conn.; H. F. Askew, J J. Black, Del.; S. C. Busey, J. M. Toner, D. C.; F. D. Lente, R. D. Murray, Fla.; R. D. Arnold, Robt. Battey, L. A. Dugas, Ga.; N. S. Davis, Moses Gunn, D. Prince, Ill.; G. W. Mears, Theoph. Parvin, Ind.; R. C. Hewitt, J. D. Jackson, D. W. Yandell, Ky.; S. M. Bemiss, T. G. Richardson, S. Dickson Bruns, La.; W. W. Greene, Me.; C. M. Ellis, Chris. Johnston, N. R. Smith, Md.; H. J. Bigelow, H. I. Bowditch, E. H. Clarke, C. Ellis, D. H. Storer, Mass.; R. C. Kedzie, Theoph. McGraw, A. Sager, Mich.; C. E. Smith, A. B. Stuart, Minn.; Wirt Johnston, J. M. Taylor, Miss.; John Greene, J. T. Hodgen, J. L. Teed, Mo.; P. E. Hines, W. A. B. Norcom, N. C.; A. B. Crosby, N. H.; Wm. Elmer, Edgar Holden, T. R. Varick, N. J.; Fordyce Barker, Gurdon Buck, F. J. Bumstead, Austin Flint, J. C. Hutchison, A. C. Post, Stephen Smith, N. Y.; R. Bartholow, P. S. Connor, J. C. Reeve, O.; T. Green, A. M. Pollock, J. L. Stewart, Pa.; E. T. Caswell, E. M. Snow, R. I.; E. Geddings, R. W. Gibbes, F. P. Porcher, S. C.; W. K. Bowling, Paul F. Eve, Tenn.; Jas. L. Cabell, L. S. Joynes, Hunter McGuire, Va.; J. C. Hupp, J. E. Reeves, W. Va.; W. A. Gott, Wis.; J. K. Barnes, U. S. A.; Jos. Beale, U. S. N.; J. M. Woodworth, U. S. Marine Hosp. Service.

MORTUARY STATISTICS OF SOUTHERN CITIES FOR NOVEMBER, 1875.

Mobile.—"The city has been remarkably healthy for the past two months." [The same may be said of the health of all the cities whose mortuary reports we publish.]

Atlanta.—Still no report received.

(Compiled from Reports of the several City Boards of Health.)

Cities	RICHMOND, VA.				NORFOLK, VA.				LYNCHB'G, VA.				MOBILE, ALA.				SELMA, ALA.				PETERSB'G, VA.			
Health Officers, ...Doctors	J. G. Cabell.				J. B. Whitehead.				W. H. Dulaney.				W. D. Bizzell.				John P. Furniss.				J. H. Claiborne.			
Population	Census Feb., 1874, though estimated at 65,' 00.				Estimated.				Estimated.				Census 1870. In addition 1,200 Creoles are estimated				Estimated.				Census 1873.			
	White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
	33,452		27,213		13,500		9,500		7,000		7,000		18,115		13,919		3,500		4,000		8,744		10,185	
Sex	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F	M.	F.	M.	F.	M	F.	M.	F.
Number of deaths	19	28	28	24	3	9	8	5	1	4	10	5	24	18	18	14	0	1	4	2	4	9	14	24
Number still-born in addition	5		5		Color not give	, 6			1		3		4		9		0		2		Color not given, 4			
Ages. Ages unknown not calculated. Under 1 year	6		12		2		6		...		2		8		9		....		2		Color not given, 10			
" 3 years	3		2		2		...		...		2		3		3		...		2		" " 7			
" 10 "	4		3		3		2		...		3		1		3		...		2		" " 4			
" 20 "	1		3		...		...		...		...		2		2		...		...		" " 3			
" 30 "	4		5		1		1		...		2		3		2		...		...		" " 4			
" 40 "	3		6		1		...		1		1		6		4		...		...		" " 4			
" 50 "	3		5		1		...		...		...		4		2		...		...		" " 9			
" 60 "	3		5		...		...		1		2		8		2		...		...		" " 5			
" 70 "	9		6		1		2		1		1		3		3		...		...		" " 2			
" 80 "	3		2		1		2		...		..		3		2		1		...		" " 2			
" 90 "	3		3		...		...		...		...		1		...		...		1		" " ..			
" 100 "	...		...		...		...		...		...		...		...		...		...		...			
Over 100 "	...		...		...		...		...		...		....		...		...		...		...			

CAUSES OF DEATH.

Abscess, Lumbar	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Accidents, Suicides, Wounds, &c.	3	2	.....	.....	.....	.....	2	2	.....	.....	1	4
Alcoholism, Delirium Tremens, &c.	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Apoplexy	4	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Birth, Premature	1	.....	.....	.....	.....	.....	1	.....	.....	2	.....	.....
Brain, Softening of	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	2
Bright's Disease	.....	1	1	1	.....	.....	.....	1	.....	.....	.....	.....
Bronchitis	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....	.....
Cancer	4	1	1	.....	.....	...	1	1	.....	.....	.....	.....
Cholera Infantum	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Congestion Bowels, Brain, Lungs	3	1	.....	1	.....	.....	3	2	.....	.....	.....	.....
Congestive Chill	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Consumption	5	7	.....	1	1	1	.....	.....	.....	1	.....	.....
Convulsions	.....	.....	1	2	.....	.....	2	2	.....	.....	.....	.....
Croup	1	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....
Cystitis	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Diarrhœa and Dysent'y	.....	2	.....	.....	.....	.....	1	1	.....	.....	2	2
Diphtheria	2	.....	3	.....	.....	.....	.....	.....	.....	.....	2	.....
Dropsy	1	1	.....	.....	1	2	.....	1	.....	.....	.....	.....
Enteritis and Gastritis	.....	.....	1	.....	.....	2	3	2	.....	.....	.....	.....
Fever—Remittent	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
" Typhoid	1	2	.....	.....	.....	.....	[redacted]	1	.....	.....	.....	.....
Heart Diseases	2	5	1	.....	.....	.....	[redacted]	4	.....	.....	.....	.....
Hemoptysis	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hemorrhage, Umbilical	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Hepatitis	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Ileus	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Infanticide	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Liver, Abscess of	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lung, Gangrene of	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Meningitis and Cerebro-Spin. Mening.	2	1	1	2	.....	1	.....	.....	.....	.....	.....	.....
Metritis	.....	.....	.....	.....	.....	....	.....	.....	.....	2	1	1
Neuralgia	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Old Age, Inanition, &c.	6	3	1	1	.....	.....	3	1	.....	.....	.....	2
Ovarian Tumor	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Paralysis, General	.....	1	.....	.....	.....	.....	3	1	.....	.....	.....	1
Peritonitis	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Pneumonia	2	7	.....	1	3	.....	2	1	1	.....	.....	3
Rheumatism	.....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....
Scrofula and Tabes Mesenterica	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....
Syphilis	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Teething	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....
Tetanus	1	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....
Thrush	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Trismus Nascentium	1	2	.....	.....	.....	.....	.....	2	.....	.....	.....	Color not gv'n 17
Tnknown and Ill-defined	1	5	.....	.....	.....	6	1	4	.....	.....	.....	
U Urœmia	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	

Journalis'ic.—That excellent journal, lately known as the *Chicago Journal of Nervous and Mental Disease*, will hereafter assume the cosmopolitan title of *The Journal of Nervous and Mental Disease*, and will be published simultaneously in New York and Chicago. Drs. Wm. A. Hammond, of New York, S. Weir Mitchell, of Philadelphia, and E. H. Clarke, of Boston, are also added to the editorial staff. We are glad to know that its past success has greatly surpassed the expectations of its editors.

The Louisville Medical News is a new weekly journal to be begun January 1st, 1876, in Louisville, Dr. R. O. Cowling, editor.

The Indiana Medical Journal has been consolidated with the *Cincinnati Lancet and Observer*, which will be enlarged to 96 pages monthly, and the subscription price will be raised to $3.50.

Acknowledgements.—Our thanks are hereby returned to Mr. H. H. Burrington, of Providence, R. I., for one of *Dr. Wadsworth's Uterine Elevators*. It is made of India rubber, without lead, and has the shape represented in the advertisement on another page. It stands endorsed in remarkably laudable terms by members of the regular profession at home and abroad. Drs. James E. Reeves, editor of the West Va *Medical Student*, at Wheeling; Jas. L. White, Farmville, Va.; Alex. C. Sloan, Desden, Texas; and C. A. Edwards, Prattsville, Ala., are among the Southern physicians who have used it and speak favorably of it.

Corrections.—Due to the unavoidable haste in which the Transactions of the late session of the Medical Society of Virginia were printed, several errors have crept in. Those that require immediate correction are: In Dr. Philip B. Baker's *Cases*, page 68, line 16 from top, read *lithotrity* for lithotomy, and in second line below, read stones for stone. In the Appendix, containing Dr. Cabell's report on *Defective Drainage, etc.*, page 92, line 24 from bottom, expunge the word *no*, so as to make the sentence read "are more attributable," etc. On page 123, line 6 from bottom, make the sentence read "October 17th, 1876," instead of 19th.

VIRGINIA
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Original Communications.

ART. I.—*On Some of the Disorders of Sleep.* By S. WEIR MITCHELL, M. D., Member of the Nat. Acad. of Sciences, etc., Philadelphia, Pa.

During many years of practice, to which has fallen a large number of curious or interesting cases of nervous maladies, it has been my fortune to meet with many which were in some way related to the state of sleep. These were, some of them, extreme cases of well known troubles; but others were examples of conditions which have either not been described, or have not been generally recognized.

In offering to your readers my notes and some comments, I shall preface what I have to say by stating my belief as to sleep, or rather my disbelief. Of late years, it, like everything else among the phenomena of health, of disease and of poisonings, has come in for its share of vaso-motor explanation—one man regarding it as a normal congestion, and one as a daily anæmia from vasal contraction. Neither is as yet proven, for although we know that the surface vessels lessen in calibre during sleep, we know but only this, and have no right to the inference so hastily made, that the brain sleeps because of the lessened areas of its vessels. For this is what also happens in the anæsthetic stage of chloroform inhalation—a state most unlike true sleep.

I was struck, indeed, about two years ago, with the marked line between these states, when, as Dr. Wm. Thomson and I were watching the eye-ground of a chloroformed child, through an atropinized and dilated pupil, suddenly I ceased to see the disc with ease; I looked up, and in a moment or two it became clear to us both that the dilated pupil which the chloroform left

unchanged, had suddenly contracted, as the child passed into a state of natural sleep, and so stayed until we awakened him, when it opened abruptly—a beautiful illustration of the peculiarities of sleep.

Neither in ether nor chloroform poisoning, as all now admit, nor yet in sleep, as some are beginning to think, is the vasal state the essential cause of the phenomena. It accompanies sleep, for example, but is not sleep. More probably is sleep a distinct condition of the brain cells—a condition which, perhaps, may never be thoroughly comprehended, and which is more likely in itself a cause than a consequence of contracted vessels.

It is, indeed, in some of its disorders, that we may find the best reason for thinking it more than a mere result of lessened blood supply, because in some of these, certain mental capacities may be active, while others seem quite dormant —an inconceivable result of mere variations in the blood supply of closely placed centres, and the more strange to any one familiar with the mode of supply of blood to the brain.

I do not doubt, of course, that many head troubles are due to vasal palsies or spasms, but to look to the vascular states alone for explanation of a functional condition (sleep), would be as wise as to refer to them alone as the cause of other functional activities, such as emotion or attention. In the present uncertainty as to the real causes of sleep, I shall content myself with clinically dealing with the subject in hand, conceiving that for the most part the physiology of sleep is too little advanced to enable us to use it in explanation of the diseases of sleep.

Night Terrors.—One of the most curious, and practically one of the most interesting, of these disorders, is that which, in children, we all know as "night terrors." Perhaps because it is so familiar, the books deal little with this troublesome malady. In West, on the *Maladies of Childhood*, it is briefly described, and in so admirable a work as Meigs and Pepper on the same subject, it is not even alluded to. West makes rather light of it, but there are some mothers who would have a rather different story to tell, and, clinically speaking, it has not as yet been fully delineated.

As an occasional malady we see it in children, otherwise healthy, who are at the beginning of some disease, grave or

slight. It is a first or early sign of trouble. I have seen it precede by some days, an attack of scarlet fever, and I recall once having been sent for to see two children, who within half an hour, awakened with night terrors, and next day began to sicken with measles; but these facts are rare. Usually it is traceable to over eating or late feeding, with too heavy food.

I know many children, who have had one, two, or rare attacks; but there is another class, increasing, I fear, in our great cities, who have inherited or acquired the nervous type of constitution, and who are, above all other children, susceptible to the action of the causes which bring on the various forms of night terrors. With these children this disorder is sometimes frequent, enduring, and even the parent or accompaniment of graver neural diseases. The words *night terror*, I may say, apply only to a part of the cases. The condition would in every instance be more truly described, as belonging to the class of somnambulisms. A child awakens, or I should say, passes on a sudden without waking, from sleep into a state of terror, in which it is still the victim of some dreamed delusion, in the visual sphere. It sees, or seems to see, an animal or a man, and in a few cases, the visual seeming is always the same. I have one case in which the animal is always a bear. The child cries out, hides its head, begs you to drive the creature away, and after awhile slowly or abruptly recovers and passes into the state of being truly awake. I have often talked to these little ones, and found they had no remembrance of the horror of the last few minutes, or of the past night. In other instances, like one I saw yesterday, it is simply a terror, to which no verbal expression is given, and these cases are of course apt, especially in young children, to be misunderstood.

In other cases, as in highly nervous children, the child suddenly arouses, and begins to laugh, or sing, or play. In one case (a most troublesome one), it goes back to some event of the day, and talks about it volubly, or is obstinately bent on doing something with its toys, or clamors for food, which it eats with a sort of fury, or sits up, wildly gesticulating and silent. A rough shaking or loud scolding, arouses it to true wakefulness, and for a few minutes it is natural, and then it relapses—a phenomenon which does not belong to a state of true somnambulism

in the adult. One such case I have now in my care. It was brought to me from a neighboring city, after it had been the despair alike of the parents and the nurses. I have seen few things as curious.

I found the little one—a girl—just aroused at 11 P. M. She had slept well from seven. She was in bed, sitting up, and going over and over a quarrel she had had in the morning. "Brother Tom hit me, and I said—and I said—and I said—Don't, oh, don't;" and then she began to laugh, looking at a doll with one eye gone and a leg too few. "Funny doll, can't walk—can't walk," and so on. When I left, she was singing and eating bread by turns; now and then she stopped, and seemed to stare at something, or would have a few moments of wild agitation or terror. This went on up to 4 A. M., and had lasted for weeks, with now and then a night of full sleep. The term "night-terror," would hardly apply to this case, but it seems to me to belong to the same class of disorders. The next day the child knew nothing of what had passed.

I recall well another example of a fine lad, of anxious, too conscientious turn of mind, who was the child of a highly nervous father, himself the victim of frequent insomnia. The lad was allowed to overwork himself, and was permitted to eat heartily what dainties pleased him, at a late dinner. About twice a week he awakened in a sort of agony of distress over the arithmetic of his morning's lesson. He would begin to add, and subtract, and then pause, and burst into tears. It was impossible to awaken or console him, and after half an hour he would fall back suddenly and sleep as before. Like some others, he was apt to wet the bed while in this state, but this is a rare coincidence.

These are some of the varieties, but there is another, of which by and by I shall give a description, from the case of an adult, another which is somewhat distinct. In those already described, the child while seeming to be awake is really asleep, while afraid; but in these others, there is, first, a dream, and then the child awakens, entirely conscious, and remains in an agony of dread, which lasts for a few minutes or as long as half an hour. Some children then remember the dream, and speak of it. If asked "Do you see it now?" they say "No; but I am afraid." In

others it is a fear without a known or remembered cause. There is something quite appalling in these exhibitions of abject dread, where intense emotion, born without known cause, continues as causelessly.

In adults, this form of sleep disorder often comes from tobacco. I am now treating a very intelligent and scholarly gentleman, who has come from New York to ask advice for such a trouble. He allows me to use this clear account of his own night terrors:

About the year 1871 I was troubled with what I understand is termed "night terror." Upon retiring, I could generally determine whether or not I should have this trouble during the night. These premonitions were: A difficulty in breathing, not being able to draw a full breath, owing, as to me it seemed, to some obstruction in the lungs; intense nervousness; turning from side to side. I would fall asleep and have vivid dreams, and almost always upon the same subject; the purport of which was "that after a long absence from home I returned, and found that some one dear to me had become idiotic. The most painful attack of this kind occurred during the year 1872. That night I dreamed that after a long absence I returned, and on approaching the city I saw, upon a steamboat, my aunt. She had become crazy in my absence, and was under the charge of keepers. As I neared the boat to speak to her, she leaped overboard and was drowned, and her body, with a fearful idiotic leer upon her face, floated past me so close that I could touch it. I awoke with a sudden start, trembling from head to foot; and although in a moment I was satisfied that it was but a dream, yet the feeling of terror, instead of leaving me, rather increased. I was obliged to rise, light the gas, and finally leave the room, and remain for several hours in an adjoining one. I then returned to bed and slept till morning; but the next evening, when it came time to retire, the recollections of the past night were so vivid, and the intensity of the mental suffering so clearly before my mind, that I could not force myself to retire. My reason told me that this was a foolish feeling, and that I ought to conquer it. But after a severe struggle, reason gave place to this undefinable feeling of terror. That night, and for several nights afterwards, although I was not addicted to drinking, I drank strong liquor until my senses were clouded, and this I did intentionally; otherwise I could not have retired. During the daytime, when thinking over this fearful attack, I concluded that were it given me the choice between passing one such night again or being deaf, blind or lame for life, I should choose the

latter; nay, I felt that even death itself would be preferable to such another night. I have never since experienced such intense suffering, but have passed through it many times in a lighter form.

This fall (1875) it took a different turn. Upon retiring, I was unable to keep my eyes closed, because the moment I closed them a feeling akin to fright would cause me to open them. After tossing restlessly in this manner for hours, I would then fall into a troubled sleep, which would last about an hour, then awake, and while satisfied that I was awake, yet I felt that my mind was slightly wandering, as though under the influence of fever.

The treatment of these cases rests on a careful consideration of the life and habits of the patient. Obvious causes of feeble or unsound sleep, which is the source of many of these disturbances, need hardly be more than indicated. Heavy feeding at night, needless excitements, overwork at school, are all causes, which any one will see and correct. But sometimes, and, indeed, far more often than is thought, the trouble is due to a highly nervous organization. I may define what I mean, or illustrate it, which I prefer.

I recall such a case in a child—a lad of slight frame, weakly, without manifest illness. He lived in doors much—being a great reader, and of active mind, with such ease of acquisition of knowledge as made study agreeable; on the other hand, a timid, irresolute nature whose physical weakness made him shun out-door sports, and the wholesome, rough ways of boys. Lack of exercise made plain food distasteful, and dainties and sweets and highly spiced diet acceptable, so that evil grew up all around. Then he was sensitive, and flushed readily, and had the headache of childhood, which I described in the *Medical Reporter* last year. His mother died of phthisis. His father is the lad over again; an aunt was insane; one grandmother had epilepsy. This lad had at least thrice a week night terrors, coming on after a week of too anxious school work. After three weeks of such annoyance, his parents were aroused to a sense of the folly with which he had been allowed to act. By this time the diet had been corrected to his disgust: exercise insisted on: school laid aside; nevertheless, the attacks went on. They were chiefly about animals, but the terror exceeded anything I have ever seen on

canvas, on the stage, or in real life. It was painful to see. He had had, I think, about 14 attacks, when he began to complain of feeling now and then dazed for a moment, in daytime. I dreaded the access of the lesser epilepsy, but under small doses of bromide of potassium in the day, and the use of a pill of the following composition:

℞. Cannab. Ind., ext..... gr. j.
Opii ext. aq.....gr. iij.
Belladon. ext..... .....gr. iij.

M. et ft. pil. No. xv. S. Take one at bed time.

he began about this time to get better, and was cured by change to the sea-side.

I have said before that tobacco is, in adults, a common cause of the disorders of sleep, as it is of loss of sleep. It is undoubtedly antagonized by alcohol, and where there is difficulty in laying it aside, the use of stimulants at bed time may serve to bridge over the days, until it can be altogether put aside. I say altogether, because old smokers become, as it were, saturated with tobacco, and have to stop it utterly for a good while before they regain their normal status, and thus learn how much of what they suffered came from tobacco.*

I suggest, also, that in every case of "night terror" the urine should be examined, because it sometimes chances that albuminuria first shows itself as an outbreak of vague symptoms, apt to be set down as neurosal, and occasionally related to sleep. I can recall at least two such cases, which it is needless to de-

*_Note by the Editor._—In cases similar to those described by Dr. Mitchell, as also in other acute neuroses due to the tobacco-habit—especially those cases marked by nervousness, muscular irritability and tremor, etc., resulting from the abuse of *smoking*—the clinical experience of the Editor has led him to lay great stress on the use of strychnia. The beneficial results of the treatment of the so-called tobacco amaurosis by strychnia, as also the known physiological antidotal effect of tobacco in strychnia poisoning, probably suggested the use of strychnia in cases of neurotic troubles resulting from tobacco. But while the Editor is not aware of any publication on the subject here incidentally mentioned, he cannot think that equally favorable results could have eluded the observation of those who have treated "tobacco amaurosis" with strychnia; for in many of the cases of the so-called amaurosis so treated there must have been some of the symptoms here alluded to, which have disappeared rapidly under treatment of the amaurosis by strychnia. The most prompt and decided benefit of strychnia in controlling the acute shaking-palsy or tremor of the hands resulting from tobacco excesses has been witnessed by the Editor on two occasions in the same individual, when the strychnia has been used hypodermically in the forearm. In this case, the patient recognized quite sensibly the physiological effect of strychnia, when even a single dose of 1-20th grain was given

tail here. In children the state of the urine often helps us to a belief that the assimilations are out of order, and so enables us to point out the true cause of the night terrors.

The bromides, and that most potent one of all, the **ithium bromide*, given two hours before, and again at bed time,* and in obstinate cases, the combination of hemp and opium, or hemp and valerianate of morphia, usually suffice, where I have to resort to drugs. Failing all else, country air and life are sure to make an effective change.

I have sometimes wished I could give to some of these children the amazing tonic of camp life, and this year, for the first time, it is put in our power by the camp school established near Wilkesbarré by Dr. Rothrock.

There is one point as to the relief of these states in childhood, which, although at first sight strange, is really in accordance with some of the well known facts with which we are familiar as to what I might call the automatic control exercised by waking impressions, decisions and beliefs, upon sleep, its deviations and some of its phenomena. In one of the worst of my cases of night terror, where the somnambulic state came on every night and lasted for hours, almost every means had been tried in vain. In despair I said, without thinking that the child (a girl æt. 9 years) was present, "When again she gets in this way put her in hot water and pour cold water over her head." She went up stairs and told her brother that if he waked at night this

by the stomach. Hence, only 1-90th of a grain was given hypodermically. Within 15 or 20 minutes thereafter the muscular control of the hand of the side in which the injection was made (right), was nearly perfect, and the general nervousness was perceptibly modified.

Space here does not allow of a fuller statement of the clinical facts in regard to strychnia in tobacco neuroses, outside of the so-called "tobacco amaurosis." Indeed, this hasty note has been added after an inquiry by letter of Dr. Mitchell as to his experience with strychnia in the class of cases referred to. He replies that he has long used it in like cases, but does not know of any publication of the facts, and therefore asks that a note be made of them. At a future time, the Editor will give more in detail the results of his observation of the agent, should the subject be deemed of sufficient interest, or should the details not be given by other observers.

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*In obstinate cases, the use of a full dose of bromide two hours before the bed hour, and of a small dose of morphia or the pill above mentioned, at the bed hour will be found useful. Dr. Da Costa's statement of the power of the bromides to modify the mischievous influence of morphia I believe to be a true and valuable observation.

fate awaited him. Then she spoke of it to her mother, with some distress at the prospect, but, to our surprise, ceased at once, and for ten days, to have attacks, and was cured by resolute use of the hot bath and cold douche.

I saw, some years ago, a similar case, in which a hot-tempered mother, in a rage at being incessantly awakened, lost her temper and made a sharp application of her slipper, with the result of once and for all breaking up the spells. I can hardly commend this therapeutic means!

The border land between sleep and the waking state is the chosen time for some of the most annoying and curious of what I suppose I may still call the disorders of sleep.

Sometimes these troubles belong solely to the mental sphere. A man who, in the day's business and pleasures, is as others, finds his nervous temperament betrays him as he is passing through the state of drowsiness. This is a common statement. Said one such person to me lately: "I lie down, and just as I am comfortably sleepy, a notion comes into my mind that the gas is turned on or a window unfastened—perhaps even some more absurd idea—but it possesses me like a devil, and until I get up and go and see for myself, I cannot rest easy. Why an idea, which in the day I would dismiss at once, should get such a grip of me just as I am going to sleep, I cannot see." "Sometimes," he adds, "this annoyance goes on all night. I get up, satisfy myself and lie down. As I doze, the same or another notion clutches me, and so I go on all night."

This interval between the two states of sleep and waking is also the time during which certain adults are subject to atrocious night terrors, which some of them assure me come over them only at this time, and while they are fully or dimly conscious. I shall let one patient tell his story in his own words:

"You ask me," he says, "to describe my case. I will try. I have had, like others, nightmares, but this is something which comes over me just as I begin to feel pleasantly drowsy. I simply and suddenly realize that I am afraid. I feel that it is coming, and I can move. If I can fully sit up, it is over; but if it catches me it is there for a minute or two after I am completely awake, and master of myself in all other respects. I have more than once kept still and sought to know why I was

in dread, or else have been able to reason with myself as to the absurdity of the fear—although nothing has been able to relieve me. The fear goes by degrees."

The physical disorders which haunt sleep or its border lands, are yet more interesting. Some have been well described, but others are less or not at all familiar to physicians.

Among these, *nocturnal epilepsy* is the most striking. As yet, it awaits even a plausible explanation of its nocturnal occurrence. I know of many persons who never have day attacks, but who, for years, have had them at night; nor have I, nor has any one, been able to draw a line, clinically, between these two sets of cases.

But among the undescribed disorders of sleep are some which may repay a few minutes' attention. One of these I may venture to call *nocturnal hemiplegia*, or night palsy, if, indeed, it deserve a name at all. It is seen under two forms. Now and then you meet with persons who have had a slight hemiplegic attack, and having recovered, are liable to awaken at night and find themselves numbed all down the side originally palsied, with some temporary lack of power. I saw to-day a lady who had, two months ago, on awaking, a slight loss of power and of feeling on the whole right side. These symptoms deepened during a few hours, and then began to mend, so that just now she has normal power, as measured by the dynamometer, and only a slight loss of feeling, which is fading under use of the wire brush conductor and a brisk faradic excitation. Frequently at night she wakes up with loss of power on the right side, and with great numbness. She has also had twice attacks of great numbness in both arms at once, which, of course, disproved the notion her husband held, that she must have gotten the part doubled under her.

Feeble or anæmic people, and some hysterical persons, exhibit the same phenomena, and it is not very rare among ataxic patients. I have not seen it followed by any grave consequences, and I am now able always to assure those who suffer from it of its entire freedom from peril.

There is yet another sleep disorder, which also belongs to the moment of falling asleep. It is one of which I have now seen many, perhaps, eight or nine, cases, and which I have more often

seen caused by tobacco than by any other agency, although it is sometimes due to the state of brain, arising from excessive or too constant mental labor, or rather of that with some one of those moral strains which seem to make brain work perilous to health.

The trouble I shall describe is rarely found alone, but makes a part of one of those groups of neurosal symptoms which have no place in the books, and which are apt to vary largely as to individual symptoms.

M. A. a prominent physician from the Northern States, after a season of greatly excessive labor, became rapidly anæmic and weak, and developed the following symptoms: Tingling, numbness and heat of the extremities—now here, now there—on the chest, face or scalp. At times, after much fatigue, islands of vasal paresis, seen as slightly raised purple blotches on the feet, are observed, and frequent waking up, with numbness of either arm; feeble sleep, a dull, occipital pain, which made him wish to hold the part; singing in the head, referred now to the back, now to the ears, but an inconstant symptom. He was at last driven to consult me by the following symptoms, which caused him the utmost alarm:

When just falling asleep, he became conscious of something like an aura passing up from his feet. When it reached his head, he felt what he described as an explosion. It was so violent and so loud, that he could not for a time satisfy himself that he was not hurt. The sensation was that of a pistol shot, or as of a bursting of something, followed by a momentary sense of deadly fear. This sense of an aura is, as Brown-Sequard wisely says, not confined to epilepsy.

I have now in my care, a very accomplished gentleman, whose case is in almost every respect like that just sketched, except that the numbness is never universal. The victim (Mr. V.) is in this instance, a slight sensitive scholar, not overworked, but too steadily worked, which may amount to the same thing. In him, the numbness of the finger ends came on abruptly, but as in the other, there is no true loss of tactile sense, and possibly, nay probably, the feeling belongs to some condition of the lesser blood vessels of the part, and only secondarily to the nerves. But as I shall elsewhere discuss these cases more fully, as vasal neuroses, I

shall stay only to speak of his form of night shock: He feels as he is falling asleep, a sense of something about to happen, but no distinct ascending aura. If he arouses himself in time, for which he comprehends clearly at the moment the need, he can by turning over relieve himself and break the chain of morbid events. He can even watch, as it were, the coming of the shock, and in some way, know the moment beyond which he must not wait. The first patient described as suffering in like fashion has also remarked on this peculiarity. Mr. V. has rarely the sense of a pistol shot or a blow on the head. "I have," he says, "at the close of the attack, a noise in my head, which is sometimes like the sound of a bell, which has been struck once, and I have in my case listened as to a bell, to the vibration coming and going at rhythmical intervals, or else I hear a loud noise, which is most like that of a guitar string, rudely struck, and which breaks with a twang." The result is always, however, a sense of dread, but not such a death terror as has M. A.

I have been told by other persons, that they were liable, when going to sleep, to have sudden sounds, faint usually, and rarely loud, but without feeling of terror.

There is much analogy between these phenomena and the familiar one of what a hysterical patient of mine calls the "fish flaps," which awaken some people when half asleep, with a general muscular act of the whole body. It is almost a natural symptom, so to speak, being so common; but in a few nervous people it repeats itself so much as to ask for interference. It is, as my friend Dr. Hughlings Jackson has remarked, a momentary unwilled discharge of nerve force.

The sensory discharges I have been discussing are of a lower sense centre upon the conscious sense centre above it. Why always it should be an auditory shock I cannot tell. Mr. A. thinks that in severe cases, it is also a sense of light, and perhaps now that I have called attention to these curious sensory illusions which haunt the time which lies just between sleep and waking, I may be happy enough to call forth from other physicians, a statement of like cases, and possibly of some in which the sense-shock may have been in the sphere of vision.

I could readily make this paper too long by adding to it some

of the phenomena of hysterical sleepers; nor would it be less interesting to dwell on the class of rare cases in which giddiness is a symptom, which reaches its maximum in the night. I suspect this to be uncommon, but in the rare examples of vertigo—sensory and motor—I mean where there is a delusive sense of the motion of outside things, and staggering, or the need to resist that, and where this vertigo seems to be due to causes originating in the brain alone and its vessels, and to be neither aural, ocular, gastric nor reflex in any shape; in such cases, the giddiness is usually bad on awaking in the morning, but is found to be worst in the night. The patient awakens horribly giddy and terrified, and after awhile this passes away. I have never remarked this in the vertigo of brain growths, but it may have escaped notice in the crowd of grave symptoms; where I have seen it, the vertigo has been a neurosis only, but always I think in old or elderly people, which is a suspicious fact.

The sudden sense of suffocation to which failing or feeble people are liable, is also another most interesting trouble of sleep, and must often have been seen by some of my readers. Probably, however, I have said enough of the disorders of sleep, but I have long thought they would bear a fuller treatment.

ART. II.—*The Physiological and Pathological Effects of Excessive Soil Moisture.* By WM. C. DABNEY, M. D., Charlottesville, Va.

Within the past three or four years, the injurious effects of excessive soil moisture, caused by defective drainage, have occupied a large share of the attention of those physicians who have devoted themselves to the study of hygiene; and already surprising results have been attained. But while the *fact* is now generally accepted, the *modus operandi* of defective drainage in producing certain affections is as yet undecided. For example, in the last edition of Dr. Parkes' admirable work on *Hygiene*, published in 1873, at page 306, we find the following statement: "In some way which is not clear, a moist soil produces an unfavorable effect on the lungs."

I propose to consider in the following pages:

1. The influence of defective drainage on the atmosphere.

2. The influence of excessive humidity of the atmosphere on the various functions of the body.

3. The influence of excessive humidity of the atmosphere in the production of an inflammation (of an internal organ), and on its subsequent progress and terminations.

1. The atmosphere generally contains from 1 to 11 or 12 grains of water to the cubic foot, depending on the temperature. The limits consistent with health are, according to Dr. Parkes, very variable. The influence of defective drainage on the atmosphere is to increase the amount of water which it contains, and to lower the temperature.

2. The influence of a humid atmosphere on the various functions of the body next demands our attention. (*a*) With reference to the *respiratory system*, the effect of a moist atmosphere and a low temperature is to increase the amount of oxygen consumed, and carbonic acid given off. Lehmann found that 35⅓ oz. avordupois weight of rabbits in the forenoon, at a temperature of 100°F., and in dry air, exhaled during an hour about 15 cubic inches of carbonic acid; while in moist air at the same temperature the exhalation amounted to about 22 cubic inches. Doubtless this increase is caused, in part, by the diminished quantity of carbonic acid given off by the skin; but we shall see hereafter that there is good ground for believing that there is an actual increase in the amount of oxidation under these circumstances.

(*b*) The effect of humidity of the atmosphere on the *perspiratory* function is well known—the amount of evaporation from the skin being in direct proportion to the dryness of the atmosphere. The chief object of cutaneous exhalation is to keep the animal heat within proper limits, and whatever interferes with this tends to elevate the temperature of the body, and thus, in a manner which we shall study hereafter, to cause inflammations of internal organs.

(*c*) It is well known that there is a very close connection between the skin and the *kidneys;* and that when the action of the one is diminished, that of the other is increased. A humid atmosphere causes an increased secretion of urine in two ways: (1) by lessening the exhalation from the skin, and (2) by caus-

ing contraction of the capillaries in the skin, and thus greater pressure in those of the kidneys and other internal organs.

(*d*) It is implied in what has just been said, though it may be better to state it plainly, that owing to the contraction of the capillaries of the skin, there is an increase in the *blood pressure*. My attention was first called to this fact some years ago while making experiments on the influence of various drugs on the blood pressure. I then observed that the mercury in the registering tube of the cardiometer, when attached to the crural artery of a dog, rose higher in damp weather than in dry; and it was this which suggested the line of thought which I am now endeavoring to carry out.

(*e*) With reference to *animal heat*, we have already seen, in connection with the perspiratory function, that it must necessarily be increased by a moist atmosphere, although the surface of the body may be abnormally cool.

There are a few other points in physiology which afford valuable information, but it will be more convenient to mention them in the third part of our subject, which we will now proceed to consider.

3. The influence of excessive humidity of the atmosphere in the production of an inflammation (of an internal organ), and on its subsequent progress and termination. It is unnecessary for us to consider, in this connection, the order in which the phenomena of inflammation occur. It is well known that at quite an early stage, in point of time, the so-called "*exudation*" occurs, which exudation consists, in great part, of indifferent or formative cells—leucocytes. It is equally well known, perhaps, that two views have been advanced of late years as to the origin of these leucocytes during an inflammation. Virchow contends that they are the offspring of the fixed connective tissue corpuscles of the part at which they are found; while Ruhlinghausen and Cohnheim affirm that they are white blood corpuscles which have passed through the walls of the vessels at the point of inflammation. It is immaterial to our present purpose which view be adopted; *both* are probably correct.

We have seen that one of the chief physiological effects of an atmosphere, charged with moisture, on the human body is

to cause contraction of the capillaries in the skin and superficial portions of the body; and it follows from this, that a larger amount of blood is thrown in on the internal organs, thus causing a tendency to congestion of those organs; and by *congestion* we mean that condition in which there is "increased resistance to the outflow of blood."

We have seen further that a moist atmosphere lessens the discharge of water from the body, thus lessening the concentration of the blood (for the kidneys cannot remove all of the water which the skin fails to carry off under these circumstances). Now, the "influence of the concentration of the blood and tissue juices on the changes of form and place of the colorless blood corpuscles" has recently been made the subject of investigation by R. Thoma (Virchow's Archiv, vol. lxxi, Heft 1). He states that if water be injected into the blood vessels of a frog, those corpuscles "which lie upon the walls of the vessels exhibit very lively changes of form." He found further, that the same lively changes of form and place occurred in the wandering cells outside of the vessels when the tissue juices were comparatively dilute.

But the diminished evaporation from the skin produces yet another effect, namely: it causes an elevation of temperature, as we have heretofore seen. The late Max Schultze demonstrated beyond a doubt that the colorless corpuscles of human blood are unusually active at a temperature ranging from 100° to 104°F.; any temperature above the normal, in fact, up to 104°, increases their amœboid movements; and advantage is daily taken of this fact by the physiologist when studying the movements of cells. The same statement applies to the fixed connective tissue corpuscles, though their movements are much slower.

We would not, perhaps, go beyond "the bounds of reason and of truth" should we say that this elevation of temperature and dilution of the blood give rise to *nutritive irritation*, which is the starting point of inflammation, but it is unnecessary to go back thus far.

It is a subject of constant observation and remark that a cold attacks one's weak point—where there is, perhaps, some chronic inflammation or congestion. And in the last number of the

American Journal of Medical Sciences (October, 1875), is an article by Dr. A. F. A. King, of Washington, in which he contends that the reason why some persons have an acute inflammation after exposure to cold and others escape is that the organisms of the former are undergoing rapid physiological or pathological evolution. This theory (and it is perfectly consistent with the *facts*) is entirely in accordance with the views which I have expressed above as to the *modus operandi* of a humid atmosphere in causing inflammations. For in order that rapid physiological or pathological evolution may occur, it is necessary that many formative cells or leucocytes be present; and we have seen how readily they undergo changes of form and place, and multiply also under the conditions which exposure to cold and dampness create.

It is evident, we think, from the foregoing how defective drainage may cause inflammation of an internal organ; and we shall now endeavor to show what effect it has on the progress of such an inflammation.

It will doubtless be universally acknowledged in a general way that anything which is capable of setting up inflammatory action *de novo* is sufficient to keep up such action. So well recognized is this fact that it seems scarcely necessary to discuss it at all, and I shall say but little on the subject.

It is well known that the danger in fevers, especially typhoid, is generally directly in proportion to the elevation of temperature. I do not know of any observations which have been published showing the influence of the atmosphere on the temperature of the body in sickness. Doubtless such observations have been made, however. In August last I attended three cases of fever—two very severe cases of typhoid (one ending in recovery, the other in death), and one of continued fever, which was scarcely severe enough to be called genuine typhoid, and yet which bordered very closely on it. Of these cases I have accurate notes, and the effect of the weather on the temperature was very marked. The following tables show what this effect was:

CASE I.—

DATE.	TIME.	WEATHER.	TEMP'TURE.	TREATMENT.
August 12th..	7.00 P. M.	Clear and dry	103.6..	Beef-tea & egg-nog.
" 13th..	7.30 A. M.	Rainy and damp..	104.3..	" "
" " ..	2.30 P. M.	Clearing	103.5..	" "
" 14th..	12.00 M.	Clear	103.7..	" "
" " ..	7.30 P. M.	Drizzling	103.7..	" "
" 15th..	11.00 A. M.	Cloudy and damp.	103.7..	" "
" " ..	7.30 P. M.	Cloudy and damp.	105.7..	" "
" 16th..	1.00 A. M.	Drizzling	104. ..	" "
" " ..	6.45 A. M.	"	104. ..	Sulph. quin. ½ drachm
" " ..	10.30 A. M.	Clear and bright..	102.4..	" "
" " ..	6.45 P. M.	Rainy	103. ..	" "
" 17th..	11.15 A. M.	Cloudy and damp.	106.2..	" "

The patient died at 2 o'clock on the 17th. He was about 28 years old, and quite a strong, vigorous man.

CASE II.—

DATE.	TIME.	WEATHER.	TEMP'TURE.	TREATMENT.
August 14th..	5.30 P. M.	Cloudy and damp.	104.5..	Subnit. bism., tannin & opium.
" 16th..	3.30 P. M.	Cloudy	104. ..	Sulph. quinia, ½ drachm.
" 17th.	5.00 P. M.	Clear	103.1..	Bismuth, tannin and opium.
" 18th..	12.00 M.	Showery	102.3..	Sulph. quinia, ½ drachm.
" 20th.	12.00 M.	Clear and dry	100.9..	Bismuth, tannin and opium.
" 22d..	10.30 A. M.	Cloudy and damp.	101. ..	Morphia, gr. ¼.
" 24th.	5.30 P. M.	Raining	103. ..	Sulph. quinia, ½ drachm.
" 28th.	1.00 P. M.	Cloudy and damp.	100.2..	" "

This case terminated in recovery. The patient was a young man, aged about 24, and the chief source of trouble was an obstinate diarrhœa.

CASE III.—

DATE.	TIME.	WEATHER.	TEMP'TURE.	TREATMENT.
August 24th..	11.00 A. M.	Rainy	103. ..	Quinine, gr. v; opium, gr. ½,
" 25th..	11.30 A. M.	Clearing	102.9..	" "
" 27th..	12.00 M.	Cloudy and damp.	103.3..	Sulph. quinia. 1 scruple.
" 28th..	4.30 P. M.	Cloudy	102.8..	Turpentine.
" 30th..	10.00 A. M.	Clear, dry & warm	100. ..	"
Sept. 1st..	10.30 A. M.	Cloudy	100.3..	Sulph. quinia, 1 scruple.

This case also ended in recovery, but the patient was remarkably long in gaining his strength, which was probably due in part to his age—he being rather over 50.

A glance at these cases will show that when the air was damp there was almost invariably an elevation in the temperature of the body, unless remedies had been used to depress it, such as quinia in large doses.

It is unnecessary to spend more time on the influence of dampness on the progress of an inflammation, and we pass on to consider its effect on the *terminations*.

There are four ulterior changes which inflammatory lymph may undergo—absorption, organization, degeneration and death.

Of degeneration there are various forms, such as horny, calcareous, waxy, fatty, pigmentary, mucoid or colloid, caseous and

probably tuberculous, though it is thought by some that this latter can only occur in persons who are, at the time, the subject of tubercle. Of these various forms none perhaps is so important on account of its frequency and the results to which it leads as the caseous; and we think it can be shown that nothing favors this form so much as dampness. It will doubtless be granted in a general way that anything tending to interfere with the absorption or organization of inflammatory lymph will make it liable, to a certain extent, to some form or other of degeneration; for the longer the inflammation continues the greater will be the mass of cells which accumulate at the inflammatory focus.

As a general rule, according to Rindfleisch and Billroth, these cells are disposed of by fatty degeneration, and this statement may be verified at any time by the microscope. For example, after a catarrh of the smaller bronchi during retrocession of the attack, the sputa will be found to contain cells which are undergoing fatty degeneration, and many of them have already been broken up into a granular detritus. The same thing may be observed in a case of catarrhal pneumonia progressing to a favorable termination, and, perhaps, this is a more suitable example for our present purpose.

For this fatty degeneration to occur, it is necessary that a sufficient amount of fluid should be present, and this fluid has to be furnished in great part by the blood vessels (Rindfleisch); but if the mass of cells is very great, the amount of fluid is insufficient, for the cellular "knot" is little if at all penetrated by blood vessels; and the result is, it undergoes cheesy or caseous degeneration. Buhl and Niemeyer have demonstrated that of the various forms of pneumonia, that in which caseous degeneration is most apt to occur is the "chronic interstitial" form; and this is entirely in keeping with what we have just stated to be the cause of "caseation."

The further progress of the caseous material depends very much on the part of the body where it is formed. When it lies at "an inner surface of the body, be it of the respiratory or digestive tract, and has, therefore, other sources of water besides the surrounding nutritive fluids," softening generally occurs. In other parts, calcification is more frequent.

A question will naturally arise here: If the presence of water

causes the softening of the caseous mass, why did not the presence of water in the atmosphere, which, there is good ground for believing, caused or at least aggravated or prolonged the inflammation, *prevent* the degeneration into caseous material? Two theories may be advanced to account for this, but I cannot claim that they are *more* than theories. (1) When the inflammatory point is in the lungs, the bronchi leading to it are, as a rule, "obstructed by a plug of secretion of older date" than that at which caseation occurs, and thus the water taken in by inhalation is cut off. (2) The cells of which the knot is composed consist, to a very large extent, of albuminates; and these are not acted on by water, but are acted on by a solution of the alkaline carbonates, which seems to explain why blood prevents caseation (Lander Brunton in *Handbook for Physiological Laboratory*, p. 435). Another point of interest is that the true softening always occurs in the *centre* of the knot. "It is certainly difficult," says Rindfleisch (*Pathol. Histology*, p. 406), "to understand the necessity of this so constant phenomenon. I accept that a portion of the solid albuminates, by long digesting at 100°F., goes over into the soluble modification, and these then attract from their surroundings as much water as is necessary to their solution."

Experiments and clinical observations have demonstrated that true tubercle may be caused by inoculation with this caseous material; and it is well known that many cases of consumption are really owing to the breaking down and softening of the masses. Thus it is evident how soil moisture may cause "wasting diseases of the lungs." Of course, the same thing will apply to other internal organs.

I do not propose, however, in this paper to study the influence of defective drainage on the development of particular diseases. The subject is too vast a one to be considered *properly* here, and too important to be *lightly* treated.

The conclusions to which, I think, we are warranted in coming, may briefly be summed up as follows:

(1) Defective drainage causes dampness of the atmosphere.

(2) Dampness of the atmosphere increases the blood pressure in internal organs, lessens the discharge of water and elevates the temperature of the body.

(3) The increase of blood pressure in internal organs causes a tendency to congestion.

(4) The increase of the fluid portion of the blood and the elevation of temperature of the body increase very greatly the activity of the blood corpuscles and connective tissue corpuscles in their changes of form and place, and also increase the development of new cells from them.

(5) Any cause capable of originating inflammatory action is sufficient to keep up such action, as a general rule.

(6) The longer an inflammation lasts, the greater, as a rule, the mass of cells accumulated at the inflamed point.

(7) The greater the mass of cells the greater the difficulty of their undergoing absorption or organization, and the more apt they will be to undergo some form of degeneration.

(8) Cells are generally converted into a fatty, granular detritus before undergoing absorption; but if the mass is large, the blood they receive is insufficient for this purpose, and under these circumstances they undergo caseous degeneration.

(9) Caseous matter may undergo softening or calcification.

(10) Inoculation with caseous matter may cause true tubercle.

ART. III.—*A New Method of Studying Disease.* By A. F. A. KING, M. D., Prof. of Obstet. and Gynæcology in the Columbian University, D. C., etc., Washington, D. C.

As a prelude to the new method of studying disease, to be presented in this paper, it is necessary to observe that the plan rests upon a somewhat novel conception as to the nature and objects of pathological processes—the element of novelty consisting, chiefly, in the recognition of organic diseases as naturally designed modifications of structure intended for the conservative purpose of adaptation. To render this part of the subject sufficiently intelligible, and to illustrate at once its practical application, we may crystallize the whole matter into a series of propositions, which are as follows:

1. Organic diseases originate by the organism attempting to develop within itself special modifications of structure, which are designed, when they shall have become complete, to adapt the modified organs to modified functions they have been obliged

to perform in consequence of modification of surrounding media (environment); exactly as variation in the physiological construction of different species of animals adapts them to the various differences of surrounding media in which they are designed to live.

2. Structures thus undergoing organic modification (pathological development), like those that are in process of being developed physiologically, manifest a tendency to pursue a regular course to their naturally-designed termination. When allowed to pursue such a natural course without interruption, they are attended with little or no physical suffering, and (under the circumstances generating them) conduce to longevity; but when they are interrupted by disturbing agents, they fail to reach completion, are attended with physical suffering, and, indirectly, lead to death.

3. Any considerable structural modification of a single organ resulting from pathological evolution, will be accompanied or followed by corresponding modification in other structures of the body with which the organ first changed is intimately related; and also with modification, though to a less extent, in all the remaining organs of the body with which its relation is less intimate—the evidence of a general modification of the entire organism being more manifest in proportion to the greater general importance of the organ first affected, and to its greater degree of modification. Exactly as in physiological development no single organ having intimate relations with other organs, can make any great progress in its growth without corresponding changes also taking place in the organs with which it holds such relations; and eventually the entire organism becomes correspondingly developed.

4. When any special type of general, pathological, structural modification has been acquired, or is very far advanced in process of being acquired by parents, a disposition to undergo the same modification, as well as an increased facility, under favorable circumstances, of attaining it, will be inherited by the offspring; and if the same external stimuli that first excited modification in the parent, continue for a succession of generations, the young will finally be born with the required adaptive modification already complete, and thus what was once unequivocally pathological becomes, in the course of generations, physiological.

As a natural sequence of what has now been said, some other propositions may be added, which, however, if the preceding ones are correct, can be nothing more than mere truisms. Thus:

5. The *primary causes* of organic disease (i. e. of typical, organic, pathological modification) are changes of environment, necessitating changes of function, to the performance of which the organism, in its original, unmodified, physiological state, is not naturally adapted.

6. To *prevent* organic disease (as we now understand it) the organism must be surrounded by the special external conditions that exact from it the kind and degree of functional activity to which its original formation perfectly adapts it.

7. To *arrest the progress* of pathological modification already begun, it is required to do away with the necessity for its completion, by removing the new external conditions and the consequent demand for new functions, which had rendered the organic modification desirable.

8. To conduct the structural modification to its designed conservative termination, *when a continuance of the new external conditions is unavoidable*, the physician must imitate nature, by providing the pathologically-developing organism with the same means naturally provided for promoting the successful completion of organisms that are undergoing development that is physiological; and by protecting the former from the disturbing causes which are known to interrupt the natural course of the latter; for both are disturbed by the same causes, and the conditions that are favorable to the one are favorable to the other.

In order to study disease in accordance with these principles, it is evident the main point will be to search out the conservative design of any organic pathological modification that may be taking place. We must find out what nature is about; what the organism is trying to do.

Difficult as this may be in many cases, I propose to define a method by which the work may be in some measure facilitated. And

First: Whatever the disease, the particular case selected for study must be, as nearly as possible, a natural or typical one; it must have been surrounded with circumstances favorable to its completion and allowed to follow its intended course without in-

terruption, and at the time of being studied it should have reached its designed typical termination.

From what has already been stated under Proposition 2, it is evident that cases of pathological evolution, like those of physiological development, may be made to deviate very widely from their designed course, by certain unfortunate circumstances that have disturbed or interrupted them. Such disturbed cases are no longer typical ones, and we should not expect to find exhibited in them—not certainly to the same degree—the conservative purpose of adaptation manifested in cases that *are* strictly typical. In selecting a case suitable for study, therefore, how shall we distinguish typical from non-typical ones? The answer is: Those cases are typical which are characterized by the same qualities that attend cases of physiological development; that is to say, those that have been *gradual in their growth*, more or less completely *latent*, *exempt from supervening attacks of acute inflammation*, and in which there has been an *hereditary tendency to undergo the required modification*. Best of all, the case selected for study should be one in which the structural modification has been *for some considerable time complete*, and in which the individual has finally died at a good age, either from accidental violence, or from some other disease having no very intimate relation with the one under special consideration.

But here it will at once be observed that if these purely typical, natural, and perfectly completed cases were the only ones that could be profitably studied, but few opportunities would be allowed the student of pathology for prosecuting his work. This is very true, and here we recognize one of the chief reasons why the conservative purpose of typical pathological structures has so long remained unknown and indeed unsought. The cases usually submitted to the anatomist have, owing to very evident causes, deviated so widely from what Nature intended them to be, that the *post-mortem* evidences of conservative design have been obscured beyond recognition.

The object of autopsies, generally, is to find out the *cause of death*, and those organs are most critically examined the changes in which immediately led to the fatal issue; hence the new, sudden and acute processes that lead to destruction are sought for diligently enough; while the older, slower and more chronic

changes, which would, if considered, be far more likely to exhibit conservative design, are thrown aside as obsolete products that only concerned the patient years before. Thus the pathological anatomist is usually a one-sided judge who in pronouncing a verdict upon the works of Nature submitted to his opinion, takes into consideration the evidence of their destructiveness, while the simultaneously existing proofs of their conservatism are totally ignored.

When this unfortunate bias in the mind of the anatomist shall have been corrected, typical cases of conservative structural modification will, no doubt, be more frequently met with; even at present such instances are occasionally recorded. And while those cases that approach more or less nearly to their designed completion may be studied with more or less profit, we cannot too strongly insist that for the conservative purpose to be displayed in its grandest harmony the modification ought to have reached its ultimate termination. The purpose of strictly physiological organs could hardly be discovered if they were presented to us only when partially formed, as, for example, in fœtal life. The function of a flower would scarcely admit of being discovered, if it always remained a bud.

Second: Having selected a case approaching, as nearly as it is possible to find one, to the typical standard, the next step in the process of study will be to compare the organ whose structure has undergone pathological modification, with the structure of the same organ in other individuals of the same species when it has pursued the usual course of typical physiological development, with a view to discover in what manner the pathologically modified organ has been made to differ *in function* from the unmodified physiological organ.

Since every alteration of structure entails corresponding alteration of function, and since structural peculiarities of a physiological kind are naturally designed for special peculiarities of function, we are inevitably led to the conclusion that all naturally-designed pathological modifications of structure must also entail a corresponding and conservative modification of function, which last, therefore, if we desire to understand the designs of Nature in instituting pathological changes, must receive our most earnest consideration.

Here it will at once be evident that the facility with which we shall be able to discover the modified function of pathologically modified structures, will greatly depend upon the completeness of our knowledge of the functions of the same organ when in its unmodified physiological state; and also, for very plain reasons, upon the constancy and simplicity of the function which the physiological organ naturally performs. It is hardly to be expected, for example, that the change of function imposed upon the spleen, the thyroid body, or Addison's capsules, in consequence of pathological structural modification, would be easy to understand: we do not yet know, certainly, the functions of those organs in a state of health. So, too, the liver and the brain, notwithstanding our very considerable knowledge of their natural functions are so complex in both structure and function, as to render any attempt to understand thoroughly the varied alterations of function imposed on them by pathological modification of structure exceedingly difficult.

Of all organs in the body perhaps none are more simple, both in structure and function, than the voluntary muscles—their one use is contractile motion. Hence we find they are liable to comparatively few pathological modifications. A knowledge of atrophy and hypertrophy, and of the different processes by which these are accomplished, would embrace nearly the entire pathological history of the muscular system. In a case, therefore, of atrophy or hypertrophy of any particular muscle or set of muscles, we readily observe that the structural condition of atrophy has entailed, as regards function, a diminution of contractile power, while that of hypertrophy has augmented the capacity for contractile motion. In this case, therefore, *the modification of function entailed by modification of structure is plain enough.* But even here, in this most simple case, there are correlative structural and functional modifications taking place, which might, did we not understand the normal function of muscle, lead us, without much difficulty, into a labyrinth of complications. Thus we note that an hypertrophied muscle has the artery that supplies it enlarged in calibre, and the number of its smaller branches increased; and upon reflection, we find this change of structure of the artery has entailed a corresponding change in its function: it is enabled to transmit more blood to the muscle. So

the nerves, veins and lymphatics of the muscle are found to undergo corresponding structural change; but all along, in a case so simple, we are able to understand what change of function the change of structure has enjoined. Even with the bony surfaces on which the ends of the hypertrophied muscle are fastened we easily recognize that the changed structure of the bone at those points—its increased elevation and roughness—has endowed the part with a required additional capacity for its peculiar function, which is to form a firmer basis of attachment for the ends of the enlarged muscle.

So again in studying a urinary bladder whose walls have become pathologically thickened from hypertrophy of its muscular layers, or a heart that has undergone simple hypertrophy of its muscular walls, we readily reach the conclusion, that in each case, the observed change of structure has resulted in a corresponding change of function: it has conferred upon the organs an augmented power of contraction—of expelling their contents.

Now it is exactly in this manner (no matter how many difficulties may at first attend the effort) that the functional modifications of all the more complex structural pathological changes of naturally complex organs, are to be sought out as necessary to the study and discovery of their conservative design.

Third: The next onward step is to ascertain what circumstances or conditions have rendered it necessary, for the continued well-being of the individual, that the observed modified functions entailed by structural modification, should be performed.

Just now we studied *what* modification of function followed any given modification of structure; we have now to enquire *why*, in conformity with the principle of conservative adaptation, should such a modification of function have been required.

To ascertain this point (which, as before, in organs of great complexity will be all the more difficult), there are several fields of enquiry at our command, all of which, however, may be comprised under one head, viz: the study of the external conditions (environment) natural to physiological organisms whose peculiarities of structure and function are the same, or resemble those of the pathologically modified organism which is the subject of investigation. This may include the study of individuals of our own species as well as of other animals. Thus, if in our own

species, individuals of an age different from that to which the pathologically modified organism has attained (either older or younger), are found to possess naturally, peculiarities of function and structure resembling those of the pathologically modified organism, we should, after having found out the circumstances or conditions that naturally rendered the peculiar functions of the physiological organism desirable and necessary, thereby gain some clue to the conditions that prompted the performance of the same peculiar functions on the part of the organisms undergoing pathological modification; for in the two cases the set of conditions would be more or less similar. The physiology of old age, childhood, infancy and even embryonic development might be studied with this view.

In like manner when we are able to discover in other animals, species or individuals possessing, physiologically, peculiarities of structure and function resembling those of the individuals in our own race that have undergone typical pathological modification, we should have every reason to infer that the external conditions surrounding the physiological *animal* (and which had rendered the performance of its peculiar functions desirable and necessary) would resemble those that had impressed the pathologically modified *human individual* and which had created the necessity for its consequent modified functions. Of course this line of enquiry might be allowed to embrace animals at any age and in every stage of their development.

Another field of research presents itself in the consideration of individuals, both of our own and other species, who naturally present structures, and perform functions, the peculiarities of which are *opposite* to those of the pathological organism being studied. The conditions of life that rendered these opposite functions desirable, it is to be presumed, would be *opposite in kind* to those impressing the organism undergoing pathological modification. Thus we learn by *contrast* what we learned before by *analogy*.

When by the method of study now indicated, the conservative design of any given disease is discovered, we at once gain an insight into its nature and cause and are thus enabled to adopt a more scientific, rational and exact method of treatment.

This mode of studying pathology is perhaps at present the

more inviting inasmuch as the great minds of the medical profession have of late adopted the opposite extreme—they have given themselves most zealously and (be it said to their praise) with wonderful results, to the study of the *microcosms* that compose the body; but in doing so have somewhat neglected to regard the grander harmony and wonderful adaptive capacities of the entire organism considered as a *macrocosm*.

ART. IV.—*Puerperal Convulsions — Cases — Treatment by Blood-letting.* By G. W. CURREY, M. D., Nashville, Tenn. (Read before the Nashville Medical Society, Nov. 4, 1875.)

I shall to-night report three cases of eclampsia or puerperal convulsions, two of which have occurred in my practice within the last four months and the other some two or three years ago.

Case 1. On the 13th of August last I was summoned at 9 A. M. in haste to see a colored woman aged 17 years. On arriving I was informed by the midwife that the patient had been in labor 18 hours; that the pains had ceased for 6 hours, and that she had had two convulsions, and that she could not manage the case and desired to relinquish the management to me.

On examination I discovered the head of the child presenting in the inferior strait. The vulva was rigid and undilated, and the mouth of the womb was equally so. Wishing nature to do the work, if possible, I ordered wine of ergot, and repeated the dose in 15 or 20 minutes. The patient was seized with another convulsion immediately after the administration of the second dose of ergot. I administered ether, (sulphuric, &c.,) and dispatched a messenger to my office for my pocket case of instruments. In the meantime I dilated the vulva and endeavored to push the child back and turn and deliver. The head of the child, however, was so impacted as to require more force than I wished to use; hence I desisted and corded up the arm of the patient, and bled her as soon as the instruments arrived, taking from 16 to 18 oz. of blood. Hoping that the bleeding would prevent the recurrence of the convulsions, I again administered the wine of ergot in full doses. Another convulsion, however, came on in 15 or 20 minutes, and I had to leave the patient to procure a pair of obstetrical forceps, which I did in some 10 minutes, and returned. Although absent so short a time, the patient was seized with still a third convulsion from the time of my being called in, and the fifth one in all. I immediately applied the

instruments, and in less than five minutes delivered the woman of a girl child. The mother recovered from the fifth convulsion immediately after the delivery of the child.

On examination I found what I had before suspected, that there was still another child in the womb. Wishing to give the mother a little rest, and as much time as possible to recover from the first delivery, I delayed for a few minutes before proceeding to the delivery of the second child. In the meantime the ergot which had been administered began to act, the womb to contract energetically, and the child descended and engaged in the pelvis. While in this condition another and the last convulsion came on, when I immediately applied the forceps, and after a few minutes manipulation had the satisfaction of delivering her of a fine boy, although apparently dead. The mother recovered and returned to consciousness almost immediately after delivery, and permitted me to direct all my attention to the resuscitation of the child, which I accomplished.

The mother, although only 17 years of age and of medium size, and as usual without a husband, made a rapid recovery, and the mother and both children are alive and doing well.

Case 2. On the 20th of August, just one week after the first case, I was summoned at 12 o'clock at night to see another colored woman, who had been the mother of 16 children, and who lived nearly opposite Case No. 1. The messenger requested my immediate attendance, stating that he believed the patient was dying. On repairing to her bedside I found the patient comatose; learned that she had been safely delivered of a child about 9 o'clock A. M. on the day previous, and that she had had two convulsions within an hour. I immediately returned to my office for my pocket case and returned, corded her arm, and endeavored to bleed her in the cephalic vein. The blood being very thick, dark and grumous flowed very slowly. I bled her again in the basilic and procured a more copious flow (still very dark and thick) of from 16 to 18 oz. of blood. She recovered from her comatose condition, and on inquiry I learned that she was very constipated. Accordingly I directed a full dose of calomel and jalap, 10 grs. each, to be taken immediately, and as there was still some signs of cerebral disturbance, I also directed $\frac{1}{2}$ gr. of morphia to be given. I left her about 12.45 A. M., and requested to be recalled if the convulsions should return. At 2 A. M. she had another slight convulsion, and still another at 4.45 A. M., more severe, when I was summoned. On arriving at 5 A. M., I made a thorough vaginal and uterine examination, and found everything in a normal condition. The patient being comatose, however, I corded up the other arm and again bled her, taking

at this time about 14 or 16 oz. of blood, which was still very dark and thick, and became grumous as soon as it reached the basin. The bleeding again relieved her, and as she was very thirsty, and to assist the purgatives which I had given before, I directed bitart. potash in half teaspoonful doses to be given in 8 oz. of water every half hour or hour, or whenever thirsty. I saw her again at 8 o'clock; she had no return of the convulsions, and at 10 A. M. she was resting so easy and appeared to be doing so well that I went to the country and did not see her again until late in the evening. Her recovery was rapid, as on the third day she was out of danger. Her convalescence was also rapid, and she has not had a single unpleasant symptom since.

Case 3. The third case, I regret to say, did not terminate so favorably. Early Christmas morning, 1872, I was called to see a large plethoric negro woman, another primipara, who had been delivered during the early part of the night. She had a convulsion immediately afterwards, and had been in a state of profound coma up to the time of my arrival, some eight hours after delivery. I made a thorough vaginal and uterine examination to ascertain, if possible, the cause of the mischief—especially to see if there was any inversion of the womb, or portions of retained placenta. Everything appeared to be in its proper condition, and the womb properly contracted. I corded her arm and took about 16 or 18 oz. of blood, which venesection, however, made but little impression upon the circulation. The blood was very dark—almost black—thick, and clotted immediately on being drawn. I directed purgatives in full doses, with sinapisms to the extremities and nape of the neck and inside of the thighs. I also directed the warm bath, with cold applications to the head while in the bath, and continued rubbing afterwards. I returned in the evening and found that she was still in a comatose condition, and that the purgatives had not acted, and that the warm bath had not been given. I again corded her arm and bled her, taking about 14 or 16 oz. of blood. Directed a repetition of the purgative medicine; also enemata, and the steady application of sinapisms to the extremities, and bathing. On account of her size and the want of the necessary vessels this last injunction could not be performed. As the brain had become completely overpowered and on account of the dilatoriness of the nurses in obeying orders, I had but little hopes of her recovery. She died on the second day, never having exhibited the least sign of returning consciousness.

Eclampsia (puerperal convulsions) is fortunately of rare occurrence. I have seen but five cases—the three reported above

and two others in the practice of other physicians. One, a young primapara, a well known young married lady of our city, of large size, lymphatic temperament, who at the time of her confinement appeared to have general dropsy. Bleeding was resorted to, the child turned and delivered; the mother was saved, but the child was unfortunately injured during the delivery. I heard an audible snap during its extraction, and when delivered it was comatose and was resuscitated with the utmost difficulty. Subsequently the child was found to be paralyzed on the left side, and died two or three months after its birth.

The other case was in the practice of the late Dr. John M. Watson, than whom a better obstetrician or more finished gentleman never lived. The patient had been delivered several times without any trouble. She was of large frame and lymphatic temperament, and weighed probably 200 pounds. The woman had been bled, the child turned and delivered by Dr. Watson before my arrival, but she was still in a comatose condition. The child was apparently dead, but was resuscitated after an hour's persistent work. The mother made a tardy recovery. The child was found afterwards to have been injured about the spine, and although it lived 3 or 4 years it was never able to walk or even to crawl.

The causes of puerperal convulsions are almost innumerable; amongst which may be classed: A plethoric constitution or habit predisposing to cerebral congestion, lymphatic temperament, causing serious infiltrations into the cellular tissues, producing general anasarca, obstruction of circulation by the development of the womb, nervous temperament, first pregnancy, constipation, retention of urine, fear, anger, jealousy, sedentary life, excessive sexual indulgences, dissipations of all kinds, loss of sleep, as well as too great indulgence in the luxuries of the bed, and a hundred of minor causes—to say nothing of the present state of society that has rendered home a pandemonium amongst a certain class of our population and keeps them continually under strong nervous and mental excitement. After delivery any abnormal adhesions of portions of the placenta, retention of clots of blood, or the inversion of the womb, will sometimes produce this unfortunate and too frequently fatal disease. Excessive flooding will produce epilepsy, or a comatose state, which should be investigated thoroughly before resorting to remedial means.

Puerperal convulsions, whether occuring at full term or before, are fortunately of short duration at the first attack, to warn us, as it were, and to prepare for the second and more severe attack, which is almost inevitable. If, however, these warnings have been disregarded, your patient will not only be prostrated by another attack, but each recurring one will jeopardize her life, and we may well dread that profound coma which may be the prelude to almost certain death.

Eclampsia has always been regarded as a very fatal disease, and has often been confounded with epilepsy, catalepsy, hysteria, chorea, tetanus, and even apoplexy. It has been divided into epileptic eclampsia and apoplectic eclampsia, a distinction with a difference, it is true, but for practical purposes (the relief of the patient), it is not necessary for me here to point out. The disease, however occurring, can be easily diagnosed by the judicious use of a little common sense and ordinary observation.

Its appearance is frequently ushered in by the usual premonitory symptoms; but sometimes it springs full-fledged, like the fabled Minerva, into existence, to the alarm and consternation of the friends and relatives, for experience has admonished them that danger is ahead and that prompt and decisive action is demanded. I need not describe the various stages of these convulsions, their general appearance, &c., for, like the idiopathic cough of croup, they have only once to be seen to be forever remembered.

When we become satisfied that we have to deal with a case of eclampsia, we should resort without hesitation to that long neglected lancet, as the only sure and certain remedy that promises relief or hope of safety to the patient. It matters not what stage of pregnancy in which the convulsions may come, the lancet should be resorted to, but more especially during labor when the prospective mother is incurring the risk of loss of her own life in complying with heaven's first law to her.

The amount of blood to be taken should be regulated as a matter of course by the constitution and general condition of the patient, and by the effect. Then proceed to deliver the patient as speedily as possible, either by turning, or by the use of instruments. If the convulsions return after delivery, or if the coma persists (which is so often the case), then we should bleed

again; and if necessary apply leeches to the mastoid process, sinapisms or counter-irritants to the extremities and insides of the thighs, and large cups up and down the spine. These should be followed by active purgatives, combining enough of antimonii et potas. tartras to nauseate without producing emesis. Nervousness should be controlled by opiates, and the convulsions by chloroform or ether. When hysteria appears to complicate the case, antispasmodics might be used.

Warm baths have been highly extolled while cold applications are made to the head, and should never be neglected in extreme cases. Blisters to the entire cranium might be resorted to in desperate cases and may often save the life of the patient when all other remedies have failed.

ART. V.—*Arsenic Found in the Subnitrate of Bismuth.* By M. G. ELLZEY, M. D., Warrenton, Va.

During the remarkable series of public prosecutions for murder by poisoning which so thrilled the community with excitement a few years since, both the legal and medical professions gave striking proof of the fact that, with few exceptions, they were insufficiently instructed in the mode of procedure necessary in such cases, to enable them to guide the course of justice with dignity and precision. Publicly and privately, the character and motives of those charged with the solemn duties of these investigations were wantonly assailed, and in some instances the high court of justice itself became the theatre of sad and humiliating scenes which we may hope never to see repeated; a greater part of which grew out of the fact that the original steps taken to procure and preserve the evidence were insufficient or improper. A man of sense is in no wise moved by the silly clamor of those foolish and wrong-headed persons who flippantly pronounce their opinions concerning matters whereof they are profoundly ignorant; yet such empty clamor serves to inflame the minds of others, constitutionally excitable, or as ignorant and silly as themselves, so that even persons of clear heads and sound judgments are mystified and misled amid the general confusion.

Sufficient time has now elapsed for the excitement which grew

out of those great contests to die away, and I may, therefore, without fear of renewing the uproar, venture to recall attention to the fact that during the trial of Mrs. Lloyd, in Leesburg, for the murder of her child by poisoning with arsenic, poison was found in a sample of subnitrate of bismuth (manufactured by Rosengarten & Son), and a portion of which had been prescribed for, and actually taken by the child during the fatal illness. Happening in Leesburg during the preliminary investigation of this case, I was requested by the counsel for the accused to examine the bismuth, which I did by means of Marsh's test, and discovered arsenic therein. Mr. William P. Tonry, of Baltimore, was employed by the State officers to make their analyses. When the trial came on, the defence summoned as chemical experts Dr. William H. Taylor, State Chemist of Virginia and Coroner of the city of Richmond, Mr. P. B. Wilson, Chemist, of Baltimore, and myself. The State summoned Mr. Tonry, Prof. Wormley, of Ohio, and Prof. Mallet, of Virginia.

Mr. Tonry testified that he had examined the remains of the child and found arsenic, and having put a portion of the bismuth through the same process found none therein. Prof. Wormley testified that the greatest quantity of arsenic he ever knew of being found in the subnitrate of bismuth was one-sixth of one per cent., and upon cross-questioning, that this was also the least and only quantity he had heard of being found, and that he referred to the case mentioned in the U. S. Dispensatory. Prof. Mallet testified to nothing of consequence with regard to the bismuth. My testimony was that I had not been able to find any case in which the quantity of arsenic found in medicinally prepared subnitrate of bismuth had been estimated except the case referred to by Prof. Wormley, which was so vaguely stated in the Dispensatory that I considered it worthless for the purposes of science; that I had examined five portions of the bismuth, some of which had been prescribed for the deceased, and found arsenic in each, using Marsh's test. I exhibited to the court a part of the result in the usual form of metallic spots deposited upon porcelain. Dr. Taylor and Mr. Wilson testified that they assisted in the manipulations of the test which produced the arsenical spots exhibited by me to the court. The trial ended in the acquittal of the woman.

Each of the chemists present, except myself, took with him some of the now celebrated bismuth to test it for his own satisfaction. I was already satisfied. Prof. Wormley made a quantitative estimate, and found one-eleventh of one per cent. of arsenic. Prof. Mallet found half as much, and also found the poison in a portion of the bismuth taken out of the jar when first opened before this case began to be investigated and prior to the prescription for the child. Dr. Taylor found no arsenic. Mr. Wilson found arsenic. I never heard the result of Mr. Tonry's investigations. Finally, Mr. Purcell, a partner of Dr. Mott in the drug business, examined the last portion of bismuth remaining in the jar, and found arsenic therein.

This case shows the importance of removing the last traces of arsenic from any medicinal preparation. It will indeed be difficult in any case to establish the *corpus delicti* beyond the possibility of a reasonable doubt, and to the satisfaction of twelve honest and ignorant men, if a portion, great or small, of the very poison charged to have been criminally administered is found in the medicine prescribed for the deceased. I have not in my own mind the smallest doubt that in the well known cases in which death resulted from moderate doses of subnitrate of bismuth the result was due to the presence of arsenic.

The subnitrate is a very unstable salt and frequently gives up to even distilled water a large portion of nitric acid, which, taking place freely in the stomach, might give rise to fatal gastritis. I have obtained no satisfactory results from the use of this medicine in medical practice. Some authorities consider bismuth itself to be poisonous in large doses.

Clinical Reports.

Premature Detachment of Placenta as a Cause of Still-Birth.
By Charles G. Stone, M. D., Brightwood, D. C.

Mrs. E. N., aged 36, was taken with labor pains Oct. 6, at 5 A. M.; sent for me at 12 M., with word not to hurry, as she usually had long and tedious labors. I called about 3 P. M., and found her suffering but slight pains, and those at intervals

of some thirty minutes. I inquired if she was at full term. She replied that she was not; that she never had reached the ninth month with any of her children, and that she had never since her last marriage given birth to a live child (having been married twice). Upon receiving this piece of information I began to inquire more particularly about the present case. She told me that some two weeks previously she had had severe pains in the small of the back, and some few bearing-down pains, lasting her a couple of days; but she did not think it worth while to do anything for them, knowing they would pass off as they had before. After these pains left she said she could detect no movement of the child, or had she since. Upon hearing this I examined her carefully, but could find no trace of vitality about the child—using auscultation and palpation. I then examined her *per vaginam*, and found the os well dilated and the parts in good condition; but the presentation was of the right lateral plane, which, owing to the history of the case, and the evident condition of the child, made me hasten to deliver her as soon as possible. So I at once replaced the arm, which had protruded, and readily produced pedic version and delivery. The child was in a state of decomposition, but not sufficient to prevent me from examining the various organs, all of which appeared to be perfectly developed. The child had evidently been well nourished up to the date of its death, which, according to the mother's statement, had occurred some ten days or two weeks previous. Having received the placenta, I carefully examined its condition as well as that of the cord, but could find nothing wrong with the latter. The placenta, however, had nearly one-half of its surface covered with a layer of pus, that must have been formed after the detachment, which, in my opinion, occurred at the time she felt the pains spoken of above. The child was fully seven months and a half old, and I could find no other cause of its death save the premature detachment of the placenta.

The following is the history of her previous labor: She was about seven and a half months gone with her first child, when she received a severe fall, which bruised her side. Shortly after the accident she was taken in labor, which lasted two days, when she gave birth to a dead child. In about eighteen months after this she was taken with pains in the small of her back and a few

bearing-down pains (it being about the 7½ month of her second gestation), which lasted her two days and passed off, and she felt nothing more, having missed, however, the quickening of the child for about two weeks. She was then taken with labor pains, and gave birth to another still-born child. And so she has had one after the other miscarriage up to this time—six in all—accompanied by the same phenomena; yet she is apparently as healthy as any one I know, having never suffered any trouble of a uterine character since the first injury.

Now the question: What is the primary cause operating in this case—is it an impression imperishable made on the uterine ganglionic nervous system? or due to something in connection with the position and development of the child? I am of the opinion it is the first.

I should have stated that this lady had three live births by her first husband.

Case of Phlegmasia Dolens of the Upper Extremities—Value of Hot Fomentations—Salivation of Pregnancy. By Wm. K. Gatewood, M. D., Jamaica, Va.

I was sent for to see a lady in an adjoining county on the 14th of October, 1875, whom I had delivered of her *first child* on the 1st. She had suffered from after pains—an unusual occurrence in such cases. On the third day after delivery she was thrown into a state of great mental distress by the death of a little nephew living with her, which caused a complete stoppage of the lochial discharge. I was sent for in the night, and found her in great pain and high vascular and nervous excitement. Gave her a hot hip bath, followed by fomentation of hops applied to the lower part of her abdomen and back, and gave a dose of morphine hypodermically, which entirely relieved her in a few hours.

She had no further trouble until the 14th. Owing to the death of my wife I could not go to see her; but from the description given me by her husband, a very intelligent gentleman, I was satisfied that it was a case of phlegmasia dolens. I advised him to apply to the limb flannels wrung out in hot turpen-

tine, and to give her 10 grs. Dover's powders at bed time, which he did for two days.

On the 16th he came for me again, and as she would not consent to send for another physician, I went to see her on the 17th. Meeting with my friend, Dr. J. M. Hundley, in the meantime, he advised me to try hop fomentations, as he had seen great relief in a case he had by their use. I found the lady suffering intense pain in the right arm, which was enormously swollen, hard, white and shining; pulse about 100. The swelling had extended to the neck and face; speech very much affected. I commenced the hot hop fomentations along the whole limb up to the head, and ordered them to be reapplied as fast as they cooled; gave her a pill of compound extract of colocynth and calomel, $\overline{aa}$ iij grs. and morph. sulph. gr. $\frac{1}{6}$, every 6 hours. Next day found her much more comfortable in every way; continued same treatment.

On the 19th, I found her doing well; continued fomentations; discontinued pills, and ordered dose of cream of tartar every morning, and 10 drops of tinct. digitalis 3 times a day. Left an anodyne to be taken at night if pain required it.

As the patient lived ten miles off, I did not see her until 21st, when I found her greatly better every way; swelling subsiding, not much pain, could talk almost naturally, but there was considerable trouble about the head; no fever. Discontinued digitalis, and applied a blister to back of neck; continued fomentations and cream of tartar every morning.

On the 24th, I found her suffering with the left arm very much, though it was not much swollen. Ordered fomentations to that also, and left a blister to be applied if not relieved.

On the 25th, I found my patient improving; the first arm she could use some, and sit up in bed; swelling greatly reduced, and there was not much pain in either arm. All milk gone from both breasts, which were very soft and free from pain, and had been from the commencement of the attack.

27th. My patient is so far recovered that I discharged her, after first placing her on 15 drops tinct. iron and 1 gr. quinine, 3 times a day.

Nov. 1*st.* She has continued to improve rapidly, and with the exception of a dead feeling about her arm is well.

I mention this case for two reasons: first, because it is one of rare occurrence; and, secondly, to recommend the hop fomentations to any of my professional brethren that may have cases of phlegmasia dolens to contend with.

The attack in the case of my patient was evidently brought on in my opinion by the irritable condition of the womb, as shown in the first part of this report, by after pains, and on the 3d of October by the great mental and nervous excitement she underwent by the death of her nephew, causing a stoppage of lochial discharge. There was another peculiarity about this lady: soon after becoming pregnant a secretion from the salivary glands commenced, and she spat from three quarts to one gallon every 24 hours during her whole term. This has not entirely ceased yet. The secretion of milk has not been reestablished, although continued efforts have been made to accomplish it.

Cases of Intestinal Occlusion—Also One of Cæsarean Section.
By Robert J. Hicks, M. D., Williamsboro, N. C.

Case 1.—A gentleman, aged 55, a farmer by occupation, was seized (Nov. 27) with spasm of the small intestines, after eating a raw potato. I saw him the same night. Repeated doses of tinct. opii were prescribed, which afforded relief. A dose of castor oil was directed to be taken after relief from the pain was secured.

On the night of the 28th I called again. The oil had failed to act; the pain in a most violent form had returned. Partial relief was again obtained from opiates. Enemata were now freely administered. Finding the bowels incapable of acting properly, I resorted to purgatives, and ran through the list of ordinary agents, and wound up with croton oil; but all to no purpose.

On 31st, Dr. Henderson, of this county, was called in, and insisted upon a further trial of croton oil, which was tried again, although I was satisfied as to the impropriety of this course of treatment. His bowels were now becoming tender and tympanitic; his stomach was rejecting everything, and during this whole time he had been without food. As a last effort at pro-

curing an action from his bowels without adding to the irritation, already threatening to pass into inflammation, I directed an enema of tobacco infusion, 15 grains to a gill of water. The effect was alarming. Within five minutes he was prostrated to such an extent that it was difficult to rouse him sufficiently to get him to make an effort to expel the injection. During the afternoon he recovered from the effect, but without having a motion from his bowels. His tongue was now dry, his bowels tender and swollen, and his stomach obstinately rejected all food. Commanding doses of opium by enemata, together with hydrate of chloral by the mouth, and occasional inhalations of chloroform to relieve sudden attacks of pain, were now resorted to, and afterwards relied on. The effect was to ameliorate gradually all the symptoms.

About the 12th day of his attack, his bowels had lost their tenderness, and the tympanites was also gone; his stomach was irritable, and his appetite had returned, although there was no action from his bowels. In this condition nothing was now directed except occasional injections of warm water, in the hope of mildly coaxing the bowels into moving.

On the 18th day of the attack, a small fœcal operation took place. A dose of castor oil was now directed, which completed the cure.

Nothing was ever seen of the raw potato, though it was diligently looked for. Previous to relief, there were occasional efforts at stool, followed by discharges of large patches of false membrane, sometimes coming away in the form of shreds.

Case 2—Occurred in the same individual. He had been suffering from intermittent fever and dyspepsia. The occlusion at this time followed immediately upon an attack of cholera morbus. A sudden and obstinate constipation took the place of the purging, accompanied by great pain. Opium was now resorted to, and brought complete relief within seven days.

In these cases, the seat of the obstruction was in the region of the navel, and in the small intestine; for he always complained of the formation of what he termed the "everlasting roll" in that region immediately preceding any violent outburst of pain, and said he had a distinct sensation of stoppage at that point of whatever he took into his stomach.

Case 3—Was in a young man 18 years old, of good health and good constitution, and not long returned from school. When brought under my care, occlusion had existed for a week. The usual treatment with purgatives had been tried, and, at last, calomel and opium resorted to. The effect had been to augment the intestinal tenderness and tympanites and the existing pain and irritability of his stomach, which retained nothing except the pills. To crown the symptoms of bad promise, the action of his bowels was reversed, and he vomited freely stercoraceous matter. Of this fact there was no shadow of doubt. Treatment was immediately changed. Tincture of opium was prescribed in drachm doses by enema, repeated *pro re nata*. Improvement was manifest in 36 hours. The pain, tenderness, tympanites and irritability of stomach gradually subsided, and within three more days his bowels were relieved by an ample evacuation, and a speedy recovery followed.

I deem it a useless waste of time to theorize about the precise nature of the obstruction in these cases; for its nature, in but few cases, can be decided except by *post mortem* examination. No disease is more distressing to the patient; none fills him with greater apprehension. It has been very properly termed *morbus miserere—miserere mei*.

Whether the cause be volvulus, invagination, tumor, the formation of pseudo-membranous bands, thickening or narrowing of the intestine from inflammation, the symptoms are the same, and are those of strangulated hernia. A dam is formed across the intestinal passage; and the secretions, natural and morbid, gases and fluids and indigestible parts of food, pent up and packed from the point of occlusion, add volume to the intestines, swell the abdomen and fill the patient with distress and anguish; and the intellect, generally unclouded, takes full cognizance of whatever passes within or around him.

Of course, the vermicular action of the intestines can but augment these morbid phenomena. What otherwise could be expected? This is, therefore, not only the natural, but the invariable effect of the purgative effort. Notwithstanding this practice has the sanction of illustrious names; Wood, Watson and others rely upon jalap, scammony, croton oil and other drastics, while Trousseau has faith in senna because it excites the muscu-

lar coat of the bowel. Such remedies, if remedies they can be called, no matter how high the authority which commends their use, cannot do otherwise than produce mischief. You had as well attempt to cure an inflamed joint by motion of the limb. If the obstruction be mechanical, these drugs will inflame the intestine, if not already inflamed, and will add to the distress of the patient, and hasten the fatal result.

With such views, you very properly ask why I prescribed these drugs in the first case now reported. My excuse is to be found in the reluctance we all feel to break away from under the despotism of authority, early instruction and early prejudice. I have now no hesitation in saying not only that this practice is mischievous, but that mankind would lose nothing by the expulsion from the medical armamentarium of the whole list of drastic cathartics as such.

Having had no personal experience with gastrotomy as a remedy in this disease, I have nothing to say in regard to it Trousseau saw two cases relieved by it, and lost his own case upon which it had been practised. Nature occasionally operates for the surgeon, and saves the patient by the formation of an artificial anus.

Rest, nature's great restorer, is the remedy. The broken limb must be put in splints. The inflamed organ must be quieted and made to keep the peace. Opium and its kindred drugs are the scientific splints of an improperly active bowel. Metalic mercury is the barbarous remedy of a barbarous age.

A Case of Cæsarean Operation—(Heretofore unreported)—A record of cases like the following is ever a matter of interest to the profession. In 1861, Dr. John R. Hicks, my father, assisted by Dr. Wm. F. Henderson, performed the Cæsarean section successfully upon a negro woman. She was first seen by them on the third day of her labor. On the fourth the operation was performed. The incision was made a little to the left of the *linia alba.* The hemorrhage was trifling. The child was removed, but had previously died. The cavity was closed by interrupted sutures. The wound was dressed with applications of tow, saturated with a mixture of tar and cow-foot oil. This application was selected because of the extraordinary heat of the season and the threatening trouble from flies. The mas-

ter and mistress were unremitting, day and night, for 42 days. At the expiration of this time she was discharged by her medical attendants, and has been well and fat for 15 years.

This is the only case of this important operation of a successful issue hitherto reported in this State, to the best of my knowledge.

Rare Complication of Locked Head in Twin Labor. By Jno. N. Upshur, M. D., Richmond, Va.

In the October number of the *Monthly* a case of the above is reported by Dr. Steel of Petersburg, who states that "in a practice of 23 years he had never before seen a case of the sort, nor had any one of the gentlemen present." The following case, occurring several years ago in my practice, is therefore reported:

I was called to see B. B., colored, primipara, æt. 20 years, 27th April, 1869. She had been in labor since the night before, and had a midwife in attendance. I found the child had presented by the breech, and half of the body was born. Pains irregular. Examination under chloroform revealed the head at the superior strait, and the head of a second child presenting in the first position of the vertex by the side of it. The head of the first child had entered the strait in the same position, and was tightly wedged in. Waters of the second child unruptured. I introduced my hand, and, with some difficulty, succeeded in pushing up the head of the second child, and the first was speedily delivered. The head was mashed as flat as my hand, and the cord was wrapped twice around its neck. Child No. 2 was speedily born, the bag of waters being entire, and the child removed after birth. The first child was, of course, dead. The second lived, but in 12 hours was seized with trismus nascentium; the attack was violent, lasted two days, but the child recovered and lived to be 11½ months old, dying from pneumonia.

(I) *Large Dose of Strychnia—Quickly Ejected—Recovery*—(II) *Case of Post Partum Hemorrhage—Child-bearing among Native Californians.* By Wm. A. Thom, Jr., M. D., San Gabriel, California.

(I.) *Nov.* 17, 1875.—I was called this afternoon to see Jesus Alvarado, a native Californian, æt. 23 years, who had taken at least thirty grains of strychnia. He had taken a bottle con-

taining one drachm of the drug, broken the neck off, spilt a few grains, and poured the rest into a glass of water, which he swallowed, leaving in the bottom of the glass a small deposit.

Immediately on my arrival, about five minutes after the suicidal attempt, I administered an active emetic, and kept on repeating the medicine until his stomach seemed thoroughly emptied. About the same time, the typical strychnia convulsions came on, and I administered chloroform to full insensibility, keeping him soundly asleep for two hours. During the earlier part of the administration of chloroform, he had three convulsions, each growing less severe, and gradually growing into mere spasmodic jerkings of the muscles. After he regained consciousness, I gave the following:

℞. Potass. bromid. .....grs. xxx.
Chloral hydrat.....grs. xx.
Chloroform .....f℥j.

M. Sig. Put in water, and take the whole for a dose.

The same prescription was twice repeated by bed time, when he went to sleep and had a fair night's rest.

18*th*. Sitting up, but unable to walk because of neuralgic pains in his legs.

19*th*. Walks to-day, but neuralgia persists.

20*th*. Neuralgia still present, but slight. Discharged.

(II.) One night in October, 1875, I was called to see Chatta Ochoa, a multipara, her husband saying that she was in labor. When I arrived, I found that the child had been born, but the placenta was still undelivered. She was sitting up in bed, supported by one of the three *Parteras* or midwives, pale, bathed in cold perspiration, pulse rapid and weak, and the bed was soaked through with blood, which dripped on the floor and ran off through an opening at the side of the room. I laid the patient flat, and on examination found the partially detached placenta tamponing the mouth of the womb, the womb itself having a soft, doughy feel. Around her waist was a corded sheet, in which, directly over the abdomen, was a moderately hard substance, the use of which I did not understand. I lost no time in removing the placenta, with which came a fearful gush of blood. I gave ergot, and kneaded the womb within and without, and in a few minutes had the satisfaction of finding

my hand expelled from the womb, which only relaxed once more, and then took the hard, billiard-ball feel. The patient made a very fair recovery.

On inquiry, I found that the sitting posture and the rope sheet with its ovoid appendage, were used to keep the *blood from going to the brain.* The last named affair I found to consist of horse manure, baked, cooled and packed into this shape. This horse manure is supposed to have the virtue of keep ng the blood in its neighborhood.

In a conversation with a woman who has lived long in this community, I find that the following is the way in which a regular Mexican midwife performs her duty: A rope is suspended from the ceiling. Under the loose end of this a folded blanket is placed, on which the woman kneels and grasps the rope, arms extended. Behind her is placed a strong man with his arms around her waist, while in front sits the midwife with both hands on the perineum. When a pain comes on, the woman pulls on the rope, the man squeezes, and the midwife bears against the perineum, which she at the same time strokes from behind forwards. After the child has been thus squeezed, shaken and jolted out, the woman is then put to bed and arranged with her rope sheet, horse manure, and in the sitting posture, all complete just as I found my patient.

Correspondence.

Southern Health-Seekers—Savannah—Aiken—Respirators—Florida—Climatology—General Remarks.

Mr. Editor,—As you will see, I am far away from home in Richmond, spending a short vacation in the South; and having indulged in a few medical jottings, I have thought that, perhaps, they would not be uninteresting to your readers.

I stopped for awhile at many sweet and pretty places on the route, but none so attractive as that picture city of the South, Savannah. Here and there we find many halting grounds for invalids from the North, fleeing from the cold weather; just as in Richmond, we see many who, satisfied with the mild climate there, determine to remain instead of going further.

If any man doubts the truth of Mr. Paley's proposition, that "no pains, expense, self-denial or restraint to which we object ourselves for the sake of health is too much," let him travel down here in the winter months, and he will be convinced that very many people act on this principle, and with much benefit to themselves. At Aiken, S. C., whose hotels and boarding-houses can only accommodate 600 or 700 guests, there are 1500 visitors annually, most of whom are in search of health. It was at first quite sad as you walked along to meet so many so plainly showing disease, wrapped in warm weather in heavy clothes, occasionally some stalwart, loving companion with them, cheering their tiresome way; at other times alone, and looking so weary and worn by slight exertion, and annoyed by the incessant cough; for the purity of the water, dryness and mildness of the climate and a slight elevation (600 feet) above the ocean, makes this specially a resort for those suffering with diseases of the respiratory organs. Here I saw in use the "respirator," not the wire gauze described by the books," but a handkerchief or slip of woolen goods, tied over the mouth, warmed by the breath, through which the external air was inhaled, thus depriving it, to some extent, of its cold and solid impurities.

Most invalids, however, pass on to Florida. Jacksonville is their grand meeting-place, and thence they radiate. Some deciding to return yearly or remain altogether, buy places and cultivate orange groves, &c., thus furnishing themselves with occupation, and relieving the mind of continually thinking of self. Those who have done this have, I understand, in a moneyed sense, done well, though, of course, to be a successful grower of oranges, some knowledge is requisite, as in every other undertaking in life. They, at least, surround themselves with the comforts of home, and thus avoid the inconvenience and discomforts of hotels and boarding-houses. On my way up the St. John's river, I fell in with many going to inspect places with a view of buying, and within less than the last twelve months land has doubled in value here and about Jacksonville; and each year the tide of travel increases. I was told that at this place (St. Augustine), the resident population is 2,000, the floating 3,000—quite a remarkable exhibit. The stranger finds much to interest him in this semi-tropical land—bananas, oranges,

lemons, dates, &c., growing in rich luxuriance; birds of rich and varied plumage, and wild, weird, romantic scenery. Even the strong and healthy come in large numbers to fish and hunt alligators and the game that here abounds. Conspicuously attractive is the Indian prison at the old fort, coquina (shells cemented together by nature and cut in blocks), with which houses are built, and the native jewelry, made of alligators' teeth, shells, fish scales and sea beans. These varied curiosities and amusements make it impossible for time to hang heavily on your hands, and relieve often the peevishness and fretfulness of phthisis.

The dark side of Climatology hereabouts is well described by Dr. C. W. Horsey, of Fernandina, who, in an article styled *Climate of Florida* (April, 1874, *Jour. Med. Sci.*,) quotes from Dr. J. P. Wall's article on "*Climate and Diseases of the Gulf Coast of the Florida Peninsula*," with remarks on the former in relation to pulmonary tuberculosis.

He says of St. Augustine that the atmosphere is "invariably moist, especially at night and morning, and under continued influences of the sea breeze and wind currents of the ocean. During the winter months, all points on the coast are exposed to the frequently prevalent northerly storms, which last at times for days, and whose fierce and penetrating blasts are difficult to be borne, even by the hardy; on the St. John's but little difference is observed in the atmosphere at the several places of resort on its banks.

"Again, the evaporation from the water necessarily causes a very considerable amount of moisture in the air, which is so great that at morning and evening perceptible mists hang over the river, and to a considerable extent on either side, and not unfrequently heavy fogs prevail. It is, consequently, at the beginning and close of the day constantly damp and chilly or damp and warm and relaxing, as the temperature may happen to be at the time. This varies, probably, a little less on the river; for lying further inland, it is more protected from the wind, though the difference is slight. The climate on the Gulf coast is much milder, though the atmosphere is more or less humid, and fogs are of frequent occurrence. It is, apparently, less subject to storms, and the winds less penetrating than on the Atlantic. The mean winter temperature of the Atlantic and St. John's may be set down at between 55° and 60°, and falls to 35° and 40°, and occasionally as low as 20°."

I am told the more interior and more Southern portions of the State have a very different climate and temperature, and perhaps the immense quantities of pine trees may be beneficial. In all probability, as this beautiful Peninsula becomes better known, resorts more and more attractive and beneficial will be open to visitors; certain it is I can hardly believe that, as a consumptive resort, it is yet fully developed. The temperature here for a given number of degrees is necessarily much colder than elsewhere; for the air being so heavily charged with moisture, it is easy to understand how it might (being so intimately mixed) in a certain manner prevent the lung tissue coming in contact with the oxygen. It is, besides, to that extent a better conductor of heat, and possesses at times a peculiar and painfully chilly sensation and piercing cold. A gentleman in good health, who lived in Minnesota, said to me that when cold he suffered more here than at home. Changes of this kind, not being expected, are not provided for by fires, &c., as in the North. The taking from an invalid, whose heat-producing powers are already weakened by disease, so much caloric, would be, in some cases, serious. It is well, then, that these spells are comparatively rare, and do not last long—not more than 3 or 4 days at farthest.

Returning, however, to the bright side of the picture, we can say that the cool nights, even in mid-summer, insure a good night's rest, and the sea breeze during the day promotes the general health; in the winter it is rarely so cold as to prevent open air exercise. Going further south, the moisture in the air would be an advantage to those suffering with deficient secretions and dry coughs. Cold moisture, though, is an irritant, and is one of the most frequent factors of pulmonary complaints and suppurative diseases. The Gulf coast is not so wet as the Atlantic. The swamps and lagoons, so numerous here, do not always mean malaria—salt impregnation acting as a preventive. From the porous, sandy nature of the soil, water is readily absorbed, and out-door exercise can be taken with much impunity after wet spells and rains. Walking, however, in sand is laborious, and often disagreeable. That great help to the sick man, milk, is hard to be obtained, and often, on asking for it, I have had to content myself with condensed milk diluted with water, a very poor substitute for the genuine article.

Indeed, in travelling South you must needs bear patiently delay and inconveniences that do not occur North. The cars on some of the railroads, to be plain, are simply devoid of all comforts and many conveniences; and the eating furnished at the way stations, though abundant, is badly cooked, and you must necessarily often carry your provisions with you, unless you want that delicate and important part, known as the stomach and digestive canal, to revolt at the indignities offered it. It was my fortune to discover on some of the trains that there were no sleeping or palace cars; on other trains only badly improvised ones, but for which Pullman palace car rates were charged. You will, however, often fall in with roads that will furnish you with all the luxuries and elegances of travel. The disadvantages are, however, all offset by the courtesy and politeness of the officials; they are always ready to do what they can for you, and accommodate you in every way possible. Never in my travels before (on railroad trains) have I met with such gentlemanly conductors as those of the South.

The ocean steamers from the North are much patronized, and I am told are elegant in their appointments and cheap in their fares. When it is considered that a good percentage of consumptives do well on the ocean, this way of going South will generally be preferred, unless you desire to relieve the monotony and tedium of your journey by seeing the country. It will be well for the traveller to have his pocket well lined with money. Expenses of travelling South are in excess of those in the North, and after arriving at your destination, if you resort to private boarding, it will cost about twice as much as it could be obtained for in Richmond—all attendance, nursing, &c., extra. But the hotels are improving, and many now are first-class, charging $4 a day. Doubtless in a few years we shall have offered, during the winter months, cheap tourists' tickets for the South—just as, in the North, they are now so abundant during the summer months.

To conclude this letter, already too long, I would say that my visit here has convinced me that there is no one place, viewed from a climatic standpoint, that is adapted to all cases of consumption. Florida can proudly boast that she has cured many, but she labors under certain disadvantages that will make her

climate unfit for certain cases. There are very many patients to whom a dry atmosphere, a considerable elevation above the ocean level, and the tonic effect of constant cold are important, *if not essential.* These cannot, of course, come here, and unless there are contra indications, I am disposed to believe that the general rule for consumptives, that those *developed* in a cold climate should seek a warm one; and that those *developed* in a dry one, a wet one is good. Thus, we are forced often to send the patient on his travels with general directions and a list of desirable places to visit, with instructions to stop and *remain* where he finds himself most benefited—always remembering that it is cruel to torture those beyond the hope of curability with the inconveniences inseparable from travel, and lonesomeness of being amongst strangers, depriving them of the comforts of home on their death beds, and the kind and loving sympathy and attention of friends and relatives.

Very truly, &c.,

CHRISTOPHER TOMPKINS, M. D.

St. Augustine, Florida, December 15, 1875.

Quinia in Osteocopic Pains of Secondary Syphilis.

Mr. Editor.—I wish to call the attention of the profession to the value of sulphate of quinia in osteocopic pains of secondary syphilis.

In quite a number of well marked cases of this kind occurring in my practice of late, I have had recourse to this agent, after having tried all of the well known alteratives and anodynes; and I am fully convinced that it has had a salutary effect in not only mitigating the patient's suffering, but, along with iodide of potassium and bichloride of mercury, it has effected a cure when the latter agents alone, or with morphia, though tested fully, had no effect appreciable to the patient.

My plan of treatment is to give the quinia at least three or four hours before the time of recurrence of the pains, in three doses, the first dose containing grs. xx, the second grs. x, and the third grs. x,—the bichloride of mercury and iodide of potassium being given *ter die.* The number of cases treated, it is true, has been few, but I have great hopes that this treatment will be

equally successful, should I have occasion and opportunity to try it again. The plan of giving morphia for the relief of these pains, I think a bad one, for the reason that the cases are generally of long standing, and the habit of taking the remedy—it being a narcotic stimulant—is apt to become so strong that it is with difficulty stopped.

In the cases where the quinia treatment has been tried, there was no reason to believe that there was any malarial influence at work, Yours truly,

W. J. H. BELLAMY, M. D.

Wilmington, N. C.

Original Translations.

From the German (*Feldarzt*, August 31, 1875.). By GEORGE HALSTED BOYLAND, M. D., M. A., etc., Baltimore, Md.

An Anæsthetic in a New Form—Intravenous Injection of Hydrate of Chloral.—Chloroform and sulphuric ether boast of such general usage that it might provoke a smile to lose many words about another anæsthetic. Nevertheless, every one knows that the exhibition of these drugs is by no means without danger; therefore we ought certainly to accept with pleasure a harmless substitution in their place.

Such an one appears to be the hydrate of chloral in its latest method of administration, namely: in the form of injections into the veins. Cuvelier, Batallion-Surgeon, describes, in the *Archives Medicales Belges*, this new procedure in the following manner: The method of injecting medicaments of different kinds into the veins is by no means new. It was already used at the time of the Alexandrian school; was soon, however, quite forgotten, until, through Oré, Professor of Physiology at Bordeaux, it came again into vogue. He employed now chloral only; in order to have a means that, for major surgical operations, could produce complete anæsthesia for a long time. Although this savant obtained by his experiments only good results, this method of giving chloral did not receive the sympathy of either the Academie de Médicine or the Société de Chirurgie,

of Paris. Deneffe and Van Wether, who repeated the experiments of Oré, came also to the opinion that the chloral injected into the veins was a powerful anæsthetic, and, by much, preferable to chloroform.

The opposers of this new method brought forward that through it, the formation of small coagula which cause emboli was favored; also, that inflammation of the veins, as well as entrance of air into the same, could very easily transpire; and mentioned several other objections. But the facts give a brilliant dementi to these quasi evils: *In 22 cases in which the intra-venous injections of chloral have been used, we count 22 successes.*

The two above named experimenters have laid before the Society of Physicians of Gand a memoir in this connection, the closing phrases of which run as follows: "The question has been proposed to us, whether the anæsthesia brought about by injections into the veins be preferable to that produced by inhalation. We answer this question to the effect that the first procedure—

1. Works surer and quicker. Complete anæsthesia is produced in the shortest time—6 to 10 minutes.

2. This insensibility is mathematically gauged, and, therefore,

3. The duration of the same depends upon the size of the injected dose.

4. Never is nausea or vomiting produced, even when the subjects come from the table.

5. Sleep and anæsthesia are occasioned *without a primary stage of excitation*, which, during the administration of chloroform or other ordinary anæsthetics, always takes place. Finally, with reference to the *harmlessness* of this method, it is thus far perfect; not the slightest accident before or after the injection has, as yet, been observed; the same cannot be affirmed of chloroform.

The hydrate of chloral should only come into use as a purely chemical, always as an *ex tempore* preparation—for the reason that it decomposes very readily, and then can work in the most harmful manner.

Having prefaced the above, we now mention that Profs. V. Deneffe and A. Van Wether, of the Gand University, have already published at Brussels a long brochure upon this new

method. Their work embraced 34 cases, in which, by means of the intra-venous injection of chloral, perfect anæsthesia has been accomplished. In all, this procedure has already been employed in 65 cases; *once*, in consequence of syncope, there was a fatal termination; in 4 cases hæmaturia or albuminuria was present.

To the just cited advantages of this method, the authors add this: that the chloral-sleep lasts from 1 to 2 days after the injection and operation, and that, therefore, the sensibility first returns at a time when the patients have long since recovered from the operation shock. Moreover, the insensibility can, without danger, be pushed to an absolute point, so that the cornea does not react upon touch, thus rendering operations on and in the eye much easier to perform.

Although the one case of death casts a shadow upon our method, nevertheless, it is probable that the same will find a place in, and prove to be advantageous to our surgical practice, if the indications and contra-indications are precisely fixed, and the instruments bettered and rendered more simple.

It is enough for us in this place to have called the attention of the medical world to an anæsthetic in a new form. Perhaps men will be found to try the new method upon animals, and also upon the human subject, and to give their good or bad results publicity for the benefit of mankind.

Proceedings of Societies.

MOBILE MEDICAL SOCIETY.

(Reported by W. D. Bizzell, M. D.)

Jan. 8, 1876.—**Relation of Menorrhagia to Early Abortion.** Dr. A. J. Reese said that the subject of abortion was one, not only of vital importance to the medical practitioner, but also to the political economist—compromising not only the health and happiness of the mother, but also abrogating the natural right which every woman should have, "to be fruitful, multiply and replenish the earth." But he neither had time, nor did the subject of appointment demand a full discussion of all the various causes which may produce abortion at every period of uterine gestation. He would confine his remarks to the relation that

abortion sustains to menorrhagia, always bearing in mind the fact that menorrhagia is merely a symptom—a profuse flow of a normal flux. He then mentioned the various causes, both constitutional and local, capable of giving rise to menorrhagia. But before we could properly study the relation of this symptom to early abortion, we must study what connection the normal menstrual impulse and normal menstruation sustains to this accident. Menstruation, as is well known, is the periodic flow of blood from the lining membrane of the womb, and is caused by the irritation and congestion incident to ovulation. Some authorities tell us that the slow and continued growth of the Graafian follicles and their contained ova cause a constant irritation of the terminal nerves which are imbedded in the rigid stroma of the ovary. This irritation, however, is so slight that it is not sufficient to set up immediately a reflex action, but at periodic intervals the sum of this irritation becomes so great that reflex action takes place in the form of a considerable arterial congestion of the genital organs, so that not only is the Graafian follicle which is furthest advanced in development ruptured by the increased intra-follicular pressure, but from the vessels of the mucous membrane hemorrhage also takes place upon the free surface of the uterine mucous membrane. The escape of the ovum from the follicle, and the hemorrhagic flow, are both consequences of one and the same cause, viz.: the pressure which the growing follicle exerts upon the termination of the nerves contained in the ovarian stroma. It is, therefore, the periodic acceleration of such growth that produces the periodic reflex action, congestion and hemorrhage of the genital organs. In case the ovum which has been extruded fails, from any cause, to be fecundated, the congestion soon passes away, and the normal condition of things is restored; but should pregnancy ensue, the afflux of blood towards the womb continues, followed by an enormous proliferation of its mucous lining, in which lies imbedded the minute but fertilized and growing ovum, merely lying here unattached, and nourished simply by osmosis. The foregoing views Dr. Reese believed to be the true ones in regard to menstruation.

If we, then, accept the views of Tyler Smith, which, he thinks, are also correct, viz.: that ovulation exists during pregnancy, periodically as in the unimpregnated state, we can see why it is that abortions are so apt to occur about the time that the catamenia would have appeared. Entertaining, then, the views herein set forth, viz.: that the menstrual molimen or impulse has its seat in the ovary, and from this point radiates that impulse that ends in menstruation, we could see how a woman with

healthy organization of her nervous system, and a healthy womb, might be able to resist the influences that ovulation would exert upon the mucous membrane of the womb. But there are many conditions which cause the womb to succumb to this menstrual molimen, to the extent of throwing off the impregnated ovum, accompanied by a profuse flow of blood, metrorrhagia.

That highly developed and irritable condition of the nervous system now so frequently found in the modern female, he believed to be a most frequent and potent cause of early abortions, (and by this term he meant those occurring prior to the third month of pregnancy). The nervous irritability of the uterus in such women is such as to be intolerant of the presence of foreign bodies, especially when to their presence is added the irritation of a period of ovulation. Excessive sexual intercourse in the newly-married he believed to be a fruitful cause of that irritable condition followed by abortion—the profuse flow in such cases being recognized, but treated as a menorrhagia, when, in reality, it is an abortion. There are other causes that may lead to abortion, such as subinvolution, granular inflammation of the body and cervix uteri, malpositions of the womb, &c.

Treatment.—The Doctor thought that if a woman with a history of previous abortions made application for treatment, after she had again become pregnant, that the practitioner could not, in many cases, hope to prevent the abortion; but by properly directed treatment in the interval between an abortion and a succeeding pregnancy, our efforts would be frequently crowned with success.

Dr. E. P. Gaines reported a case of repeated abortions in the same patient. He was finally induced to believe that the repeated abortions were due to her too frequent indulgence in the sexual embrace with her husband in the early stages of pregnancy, as the womb was quite low down in the vagina; consequently, at the next ensuing pregnancy he interdicted sexual union until after the child quickened, or till, in other words, the womb had risen out of the pelvis.

Dr. Huestis said that Dr. Fearn, many years ago, used to treat with great success many cases of abortion by what he called the revulsive method, which consisted in the administration of stimulating diuretics, such as tincture cantharides, etc., till considerable renal congestion was produced, attended with more or less strangury.

Dr. Jerome Cochran said that there could be no doubt as to the practical importance of the subject under discussion, because it is quite certain that menorrhagias and early abortions are so nearly alike in the general concourse of their symptoms as to

make it frequently a matter of difficulty to discriminate between them. He agreed with the leader in most that he had said, but on one or two points he thought it necessary, before we could appreciate fully the relations existing between menstruation, menorrhagia and abortion, to push our speculations further than had been done by him—further, indeed, than had been done, so far as his knowledge extended, by any who had treated of the subject.

He believed that menstruation was not a strictly normal physiological process, as was ordinarily assumed, but that in its last analysis it was *quasi* abnormal and pathological. He knew that at first sight this would seem to be a paradoxical statement; but he thought that a little reflection would show that, at the least, it was not altogether absurd.

The natural destiny of every mature ovum after its discharge from the Graafian follicle in which it is formed, is to undergo fecundation, to engraft itself on the uterine mucous membrane, and to grow and develop into a living creature. It is for this that the uterine mucous membrane is prepared for the reception of the ovum; it is for this that there occurs an increased afflux of blood to the womb; it is for this that the nutritive and nervous energy of all the sexual organs of the woman undergo periodical augmentation. If any part of this process fails, to the whole extent of that failure and of its consequences, the process becomes abnormal—departs from the physiological type and becomes pathological. The failure may take place at any stage of the process. The ovum may fail of perfect development within the follicle; or the follicle may fail to rupture at the proper time, or fail to rupture at all. The ovum may escape impregnation; or it may fail to find its way into the uterus; or it may fail to take root in the uterine mucous membrane; or, having taken root, its attachment may be prematurely severed. Any of these last-mentioned failures may result from defect of either of the two factors concerned—that is to say, of either the womb or the ovum; or may result from violence, accidental or intentional, where neither of them is constitutionally at fault. If there is failure at any of the stages of the process, the intention of nature is thwarted—*there is an abortion.*

Not to speak now of such abortions as depend upon adverse influences affecting the ovum before its introduction into the cavity of the uterus, we may divide abortions into the following several varieties, namely:

1. The abortion of the unimpregnated ovum, or menstruation commonly so-called.

2. The abortion of the impregnated ovum when it fails to take root in the uterine wall.

3. The abortion of the embryo, after the attachment of the ovum to the womb has been accomplished, at some stage of its subsequent development. When abortions of this variety occur at early periods of gestation, their true character may escape recognition. The fœtus, being small, may not attract attention when it passes, and the attendant hemorrhage may be mistaken for menstruation or menorrhagia.

Hemorrhage is attendant alike upon all the varieties of abortion mentioned, and is in all consequent upon substantially the same causes, namely: upon congestion of the uterine blood vessels and lymphatics, and upon the subsequent fatty degeneration of the uterine mucous membrane. The phenomena of menstruation, as shown by the recent researches of Englemann, Kündrat and others, are essentially of the same character as the phenomena of parturition at full term, only upon a smaller scale—the womb undergoing, after the menstrual delivery of the unimpregnated ovum, the same process of retrograde metamorphosis as that which, under the name of involution, follows the delivery at full term of the mature fœtus.

As to the doctrine, advocated by some authorities, that menstruation is occasioned by the pressure of the growing Graafian follicles upon the ovarian nerves, he did not think it a sufficient explanation. At best, this influence of the follicles on the nerves of the ovary is only a link in the middle of a chain of sequences and causes. Behind all this lay very specially the influence which caused the follicles to grow.

He thought it all very well to endeavor to forestall abortions by putting the womb in the best possible condition for the reception of the impregnated ovum; but he did not believe that organic uterine diseases could be relieved so readily as the leader had seemed to intimate. His own experience, at any rate, in the treatment of these maladies, led him rather to coincide in the skepticism of such German writers as Scanzoni and Schröeder, than with the rose-colored hopes which seemed to animate our American gynæcologists.

RICHMOND ACADEMY OF MEDICINE.

Jan. 6, 1876.—Dr. J. B. McCaw reported a rare case of **Tetanus as the Result of Abortion**, which will be reported in an early issue.

Dr. L. S. Joynes reported a case of **Exophthalmic Goitre**, still under treatment, and which will be reported for the *Monthly*.

Molluscum Simplex.—Dr. Christopher Tompkins, during a recent visit South, whilst in Columbia, S. C., saw an article in a daily paper stating that "The medical faculty of Augusta, Ga.,

is engaged in amputating a negro of 40 years from a mass of tumors; one of them is 27 inches by 25, and so heavy that the owner has to carry it in a sling. Besides this, there are some 300 others of smaller dimensions, varying in size from that of a pigeon's to a hen's egg."

On arriving at Augusta, Dr. T. saw the gentleman who had brought the man to the city to be operated on, and who knew the history of his whole life. From him, Mr. S. T. Schoren, a second course student, he learned that the above was true, except that, instead of 300, there were 1900 tumors. Patient was born with these tumors on him in diminutive size—none at that time being larger than a partridge egg. No vice of constitution was inherited, nor had his parents ever had an affection of this kind. Going still farther back, it was ascertained that his grandparents were imported slaves, and that their descendant was of pure blood no one will doubt on looking at his photographs [which the Doctor exhibited] taken just before he was operated on. For the first 20 years after birth, the bumps increased a little in size, but very slowly. Then suddenly they began to enlarge. The patient's general health, however, remained perfect till within the last 8 months, when the growth of the tumors seemed most active. Then in the large tumor (pedunculated in shape) sharp, darting and lancinating pains appeared, accompanied by fever of a remittent type, together with general symptoms of a constitutional character. Treatment, consisting mainly of hydragogue cathartics, was tried, with the effect of temporarily diminishing the size of the tumor. Medical treatment being finally abandoned, the mass was amputated, and the wound healed by first intention. Four weeks after the operation, the man had entirely recovered his health, and returned to his work on a farm as a laborer. The mass taken off weighed 18 pounds, and was found, on being cut into, to be mainly fibrous, with fat interspersed here and there.

Mr. Schoren told Dr. T. that, as the case had never been reported, he could make any use of it he might think proper. Mr. S. also gave Dr. T. the two large photographs referred to.

On looking into the literature of the disease, Dr. T. found a case reported in the *Archives of Dermatology*, July, 1875, by Dr. John A. Octerloney, where the tumors numbered 2333, varying in size from that of a mustard seed to a pigeon's egg. Here and there through the same journal, 1874–5, can be found many reports of cases of this trouble—all of them very interesting.

Dr. J. B. McCaw regarded this disease as almost peculiar to the negro.

Dr. Edwards, while practicing in Lynchburg, Va., met with one case in a white man, who also had diabetes insipidus.

Jan. 20th.—**Fœtal Deformity—Hernia Cerebri—So-called Hermaphrodism—Maternal Impression** (?)—The President, Dr. R. T. Coleman, reported the following case: On the night of January 15th, he was summoned to a lady in confinement at natural term with her second child. She was about 30 years of age, and enjoyed medium health. Labor pains had begun an hour or two prior to the Doctor's arrival. On examination, he found proper dilatability of the soft parts, and proper pelvic dimensions; but he was surprised to find at the os uteri a soft, elastic mass that he at first apprehended was the placenta, as considerable hemorrhage existed. Passing the finger around and above this mass, he discovered that it protruded from the head of the child at the site of the posterior fontanel, and that the head presented in the first position of the vertex. The tissues of the scalp at one point had become so thin by distension that they gave way, although but little force was used, admitting the finger into a circular opening about the size of a Mexican dollar, and with well bevelled edges. He was struck, on further examination with the peculiar conformation of the top of the fœtal head, which, instead of being convex, as usual, was wedge-shaped—the frontal and parietal bones meeting their fellows of the opposite side along the inter-frontal and sagital sutures. The nature of the case was obvious, even before the birth of the child; it was hernia cerebri—in shape and size like a bell pear, the apex of the bell-shaped mass being at the orifice in the skull. The mother being of rather relaxed fibre, and the soft parts dilatable, a dose of ergot was given, and the labor speedily concluded without instrumental assistance. The mother has had since her confinement no untoward symptoms.

The Doctor remarked that there were other particulars of interest in this case. In the first place, the cord was the shortest he had ever seen—only $6\frac{3}{4}$ inches in length; and to the separation, to some extent, of the placenta from this cause, he attributed the bleeding during labor. But the points of chief interest relate to the deformities found to exist in the child after its birth. These were, first, the deformities already mentioned in the parietal and frontal bones of both sides. A front view of the head reminded one of the usual shape of the roof of a house, viewed from side to side. The tumor at the vertex was found to be *hernia cerebri.* There was some deformity about one of the ears, externally, though nothing worthy of more special note. It was impossible by an external examination to determine the sex, though the Doctor (not believing that there is such a thing as true her-

maphrodism) was led to suppose the child to be a male. There were, apparently, no external organs of generation. The anus, instead of occupying its normal position, was where the vagina should have been, had the child been a female. About an eighth of an inch in front of the anus was a minute round opening, through which a few drops of urine were observed to pass immediately after the birth. A small pocket-case probe, the largest instrument that could be easily admitted, was passed up into the bladder, which, from this examination, seemed natural. There was no sign of scrotum in the ordinary site nor vulva; but just where the penis should be found a line could be traced upon the skin, which reminded one, in outline, of a penis. The line spoken of was simply the slightest folding or creasing of the skin; so that when the skin was put upon the stretch all lines disappeared, and there was left nothing but a flat surface, in which were the anal and urethral openings, already described. The urethra, by the by, made its exit through the upper surface, and near the root, of this supposed penis, so that epispadias was another deformity in this case. On either side of the middle of the pubic symphysis, and about half an inch from it, there was a projection of tissue, like a blind teat, about ½ inch in length, and with a base of about ¼ inch in diameter. Digital examination showed that these projections were immediately over the external abdominal rings, or the termination externally of the inguinal canals, which latter could be felt as round holes in the tissue beneath the skin. These projections, Dr. C. thought, due to nature's abortive effort to pass the testicles from the abdomen into a scrotum, of which the projections were but the rudiments.

On *Jan.* 16, a *post mortem* in the presence of Drs. L. S. Joynes, M. M. Walker and L. B. Edwards revealed the absence of uterus or ovaries, the bladder and rectum in their normal relative positions, and the presence of testes in the inguinal canal, which could be pressed down and made to fill the teats. In addition to all these deformities, the toes were webbed, and one of the toes was so displaced as to appear to be growing from the plantar surface of the great and third toes. Both feet were clubbed.

There are, in addition to the malformations, some points of interest relating to the mother, which seem to bear upon the question of maternal impressions. The grandmother of this child, as well as the mother, are firmly convinced that the deformities of this case are due to an interview that the mother had with a fortune-teller, with reference to certain losses of silver, &c. The patient, who, at the time of consultation, was about three months advanced in pregnancy, was terribly shocked

by the appearance of the fortune-teller, who hobbled into the room as if both of her feet were clubbed, and whose hideous appearance was rendered still more shocking by the bell-shaped top-knot into which her red hair had been compressed. The grandmother of the deformed child had various experiences to relate with reference to her lying-ins—this very daughter having a well-marked strawberry on her head, the result of ungratified longings for this fruit by her mother. Another child, a son, had the counterfeit presentment of a partially-filled wine-glass on his brow, which also resulted from an ungratified longing.

Dr. Coleman, in submitting this case, requested the views of the Academy as to the influence of the maternal emotions over the child in utero. He especially desired to hear from Dr. Joynes, who had bestowed upon this subject much thought, and had convinced himself, and would probably be able to convince others, of the potential part which these emotions play, not only in modifying the mental and moral, but the physical constitution of the unborn infant. Dr. C., with reference to his own views on this subject, stated that his mind was rather unsettled, as it was upon the existence of ghosts; in the day time, he was a profound skeptic on this latter point, but at night, and in close proximity to a graveyard, his views were sufficiently modified to induce him to regard it as an open question. So he regards the subject as to maternal impressions an open question. The fact that we cannot explain this influence does not militate against its existence. There is a difference between things incredible and things inexplicable. The one is opposed to reason; the other does not come within its domain. We cannot limit our faith by our knowledge; for we really know but little of God's works. The animalcule, whose whole world is a drop of water, and whose life time is a day, is no less a mystery than the leviathan of the deep. We know no more of the giant oak, whose growth is measured by centuries, than of the sweet violet that blooms in modest beauty at its root. And when we come to matters spiritual, the incarnation of Divinity—the union of God and man—what do we know, and how impossible for us to comprehend? Yet, this must be believed, for upon this faith hinges our happiness for time and eternity. Enough, then, in answer to the argument that the influence of the mother's mind over the child's system cannot be believed, because it is incomprehensible. Whatever our convictions, we had better err, if err we do, on the safe side. Dr. C. has a friend who has filled a number of conspicuous positions in this and other States. When the tocsin of war sounded, he, although sixty years of age and a citizen of Kentucky, promptly reported himself for service as volunteer aid on the staff of Gen. Floyd. He spent his first furlough with

his brother; and his sister-in-law, in overhauling his coat, was surprised to meet with two luck-bones and a buck-eye, and she said to him, "Surely, brother John, a man of your sense does not believe in these things?" "No, not exactly," he said; "yet I like to take all of the chances." So Dr. C., in his practice, takes all the chances, by surrounding his pregnant patients, as far as practicable, with agreeable associations, and removing far from them all that can offend their refined sensibilities.

Dr. L. S. Joynes then read a paper on the

Effect of Mental Impressions, Affecting the Parents, upon the Physical and Mental Condition of the Child.—He began by stating that it is universally admitted that every physical characteristic of the parents may be transmitted to the child. He thinks also that the question whether or not strong mental impressions upon the mother during her pregnancy—powerful excitement of the imagination or the emotions, or potent impressions upon the senses calculated to fix the attention and arouse the feelings in an intense degree—affect the child's health, and even the conformation and development of its body, must be answered affirmatively. Thus, a sudden fright or shock experienced by the mother has caused the speedy death of the fœtus in utero, (see Montgomery, *Signs and Symptoms of Pregnancy*). In other cases, a similar cause has rendered the child very subject to convulsions after its birth. During the worst period of the French Revolution, when the women were kept in a continual state of excitement and terror by the scenes of blood, a large proportion of the children were born with nervous aberrations, (Carpenter's *Human Physiology*, Amer. edit., 1862, pp. 782–3)

The following singular case was related to Dr. Joynes some years ago in Accomac co., Va., by the father of the child. The gentleman's wife, who was pregnant at the time, went to see a negro hung, and was much shocked at the spectacle. The child was born some months afterwards; though perfectly well-formed and healthy, he exhibited as he grew up a mental weakness on the subject of *hanging*. The sight of any object suspended would frighten him and make him tremble and beg to have it taken down. His brothers used to amuse themselves by playing upon this weakness. Even a saddle hung by the stirrups on the limb of a tree would agitate him greatly. In other respects, it appears that the boy was not unusually timid. Whether he ever outgrew this singular peculiarity, the Doctor is unable to say.

Another illustration of this point was in James I, of England. He had an extreme dislike to the sight of a drawn sword, which always made him tremble, even in the hands of a friend. This

was accounted for by the fact that Rizzio was murdered in presence of his mother (Mary, Queen of Scots), while she was in her sixth month of pregnancy with James. Sir Digby relates that when King James conferred the knighthood upon him, which is done by laying a naked sword upon the shoulder of the new knight, he could not look at the sword, but turned his head away, so that he came very near putting the point into the knight's eye.

The effect of the mother's imagination or feeling, or impression upon her senses so as to produce deformities or marks upon the fœtus, has been received by many medical men with utter incredulity, because they cannot comprehend the *how* or why. Yet it would be strange if so universally popular belief from the earliest times had not some foundation in truth. Some of our most popular authors have recognized the universality of this belief by making it the basis of their fictions, (see *A Noble Life*, by Miss Muloch; also *Elsie Venner*, by Prof. Oliver Wendell Holmes, M. D.). Of course, these fictitious cases are not adduced as evidence on the main question at issue, but merely to illustrate the effective manner in which well known writers have turned to account this widely-accepted popular belief. The real evidence on the subject consists of facts. But it may be stated that the general belief of mankind has always been taken as strong evidence of the truth in other matters. Thus the belief of all nations in the existence of a future state is held by philosophers to be one of the strongest arguments in favor of the immortality of the soul. Much more readily may we accept a universally popular conviction with regard to matters of *personal observation and experience.*

No doubt women have often assigned causes for marks or blemishes which had no real existence, but were the results of *after-thought.* The Doctor once knew a white woman who explained her having a *negro child* by her having longings for black walnuts during her pregnancy!

But there are cases which cannot be gotten rid of thus lightly. An ancient example, witnessed in the brute creation, where mental influences are less apt to operate than in the human subject, is recorded in Genesis, chap. xxx, verses 37–43. While reference is not made to the Mosaic writings for an exposition of scientific principles, we may yet appeal to their evidence for matters of fact.

Cattle breeders in England still resort to a plan similar to Jacob's, when they desire to produce in the offspring a particular color different from that of the parent animals. (Montgomery, *Signs and Symptoms of Pregnancy*, p. 37).

As examples of mental impressions, &c., in the human species producing *deformity*, and deformity of a peculiar and significant character, two remarkable cases are related by Dr. Montgomery (*Signs and Symptoms of Pregnancy*, 1857, pp. 35–36). Instances equally remarkable have been observed in this country (Cases by Drs. Storer, Jackson and others, in the Records of the Boston Society for Improvement, *Amer. Jour. Med. Sci.*, April, 1853, p. 356; Dr. J. Lewis Smith, *Diseases of Children*, edit. 1876, p. 21; Dr. Coryder, *Bost. Med. & Surg. Jour.*, Oct., 1874; Dr. Kerr, *Amer. Jour. Med. Sci.*, July, 1857, p. 285, etc).

In November, 1866, Prof. S. Logan, M. D., now of New Orleans, related the following to Dr. Joynes: A gentleman of his acquaintance had an extensive linear mark like a scar at the upper part of the forehead on the right side, just concealed by the roots of the hair. This mark is attributed to the circumstance that the gentleman's mother, during her pregnancy, was much shocked at the sight of a negro boy who had just received a severe wound in the same situation, which was bleeding profusely. The lady fainted, and the impression made upon her mind was deep and lasting. She was tormented during the remainder of her pregnancy with the apprehension that her child would be born with a mark resembling the wound which had so greatly shocked her.

Dr. Archer, of Norfolk, Va., saw a woman who, while passing the market-house, was accidentally struck by a piece of *liver* thrown out by a butcher. She brought forth a child with a *growth, resembling liver, projecting from the mouth.*

Many other cases might be recalled. Let any mathematician say how many chances there are against the occurrence of such cases by mere coincidence! It is *far more difficult* to believe that they were the results of coincidence than to believe that they occurred under the operation of *natural laws*, or natural influences, of the precise nature of which we are ignorant. In the cases reported, causes assigned were not *after-thoughts.*

We see, therefore, how important it is that the state of a woman's mind should be cared for during her pregnancy—that she should avoid everything calculated to excite disgust or alarm. And we can but approve the wisdom of the ancient Spartans who were accustomed to surround their wives while pregnant with beautiful pictures and images and other agreeable objects; and even enforced the custom by the requirements of law.

It is only in *occasional* cases in which women are subjected to strong impression that unmistakable results ensue. This may be accounted for by the different degrees of impressibility of dif-

ferent women [and of the same women at different periods]. It is only in those of an unusual degree of impressibility, of *highly nervous* temperament, that the effects in question would be likely to happen; and such is expressly stated to have been the characteristic of several of the women who were the subjects of the cases reported.

Dr. J. freely admits his inability to explain these remarkable phenomena upon any known physiological principle. There is certainly no nervous connection between the mother and fœtus; it is, therefore, impossible to *understand* how her mental impressions can be stamped upon its body. We might, indeed, comprehend how such impressions could *affect the fœtus injuriously* in a general way; for it is nourished by the mother's blood, and we know that nervous disturbances may affect all the functions of her body. They may disorder the process of hæmatosis, the secretions, the nutritive function, etc. Thus, an infant has had fatal convulsions on being *put to the breast* soon after its mother had experienced a violent fright, or a paroxysm of anger. It is quite conceivable, therefore, that the *fœtus in utero* might be killed by a similar mental cause acting through the blood; or that its nutrition might so suffer impairment that it might be stunted in its growth, or deformed in some part by arrest of development.

But because a resulting deformity, presenting an exact correspondence to its apparent cause cannot be accounted for by any known physiological principle, shall the *facts* themselves be denied? If so, how many things among the mysteries of life—especially concerning *generation*—that must likewise be denied? How can an ovum, less than 100th inch in diameter, and consisting of a little granular matter enclosed in a thin membrane become developed into a human being when it has undergone the action of those microscopic bodies—spermatozoa? And why does the new being thus produced *resemble* its parents in form and feature? There was *no trace* of human form or feature in the materials which the parents furnished. Where is the *organic connection* between the mother and the fœtus that causes the child to *resemble* the mother? There is no nervous connection, no vascular connection, no organic continuity of any kind; there is merely a transmission of *certain elements of the blood* from the maternal to the fœtal vessels. How, then—through what channel can any influence be exerted by the maternal system upon the *formless* matter of the ovum and the equally formless matter supplied by the *blood*, and cause them to assume the mother's form and features? And how explain the resemblance of the child to the *father?* It is *no real explanation* to say,

the father furnished the semen which fecundated the ovum; for that certainly contained *nothing resembling the father*—nothing, indeed, in human form. And, too, the spermatozoa of one man, under the highest powers of the microscope, exactly resemble those of any other man. If it would not be safe in matters of science to adopt the maxim of Tertullian in regard to the Trinity—*credo quia non intelligo*—it would be equally unsafe to say always NON *credo quia non intelligo.*

Haller, Becker and others state that when a mare has given birth to a mule, subsequent foals by a horse partake somewhat of the conformation and qualities of the mule. Dr. Simpson relates a case in which a white woman first had a child by a negro; and then, having married a white man, gave birth to a child presenting distinct traces of the negro. These examples are not presented as instances of the influence of the maternal imagination, because they have been explained in another manner. It has been supposed that the mother's system receives from the fœtus some of the characteristics which the latter has received from the father, and which she may afterwards transmit to another child, begotten by a different father. But this hypothesis is quite as difficult of comprehension as that which refers the phenomena to the influence of maternal impressions, and *continuing to act* at a considerable interval after their first impression. The latter, indeed, seems a more probable explanation than the former.

Dr. J. adopts Dr. W. A. Hammond's statement (*Quart. Jour. Psychol. Med.*, Jan. 1868): "The chances of these instances [referring to some cases presented in his paper] and others which I have mentioned being due to coincidence, are infinitesimally small; and though I am careful not to reason upon the principle of *post hoc, ergo propter hoc*, I cannot, nor do I think any other person can, no matter how logical may be his mind, reason against the connection of *cause and effect* in such cases. The correctness of the facts can only be questioned; if these be accepted, the probabilities are *thousands of millions to one* that the relation between the phenomena is direct."

In conclusion, Dr. J. quoted from the two most recent authorities in physiology. Dr. Dalton says: "There is now little room for doubt that various deformities and deficiences of tho fœtus, conformably to the popular belief, do really originate in certain cases from nervous impressions, such as disgust, fear or anger, experienced by the mother." Dr. Flint, Jr., says: "It must be admitted that many of the remarkable cases recorded **** as instances of deformity, due to the influence of the maternal mind, are not reliable. **** *Still, there are cases which*

cannot be doubted, but which, in the present state of our knowledge of development, and the connection between the mother and the fœtus, we cannot attempt to explain."

Dr. J. B. McCaw thought the subject one of great practical importance, and that the valuable paper of Dr. Joynes should lead every physician to use proper precautions to keep his pregnant patients away from scenes that would be apt to leave unpleasant and lasting impressions upon their minds. In support of the views of Dr. Joynes, he had met with at least three cases which had very forcibly impressed him: A lady acquaintance who was in an early month of pregnancy, while visiting another city many years ago, had occasion to send for a physician of very excellent reputation, but who had club-feet. The sight of the Doctor for the first time, as he came hobbling up to her bed side, made an indellible impression upon her memory, and awakened the fear that her child *in utero* would be born club-footed. The apprehension was confirmed in fact.

Another lady, living in one of the counties below Richmond, visited this city while in an early month of pregnancy. During her stay here, she went to a menagerie where there was an hippopotamus. The appearance of this mammal as he raised himself from the muddy pool in which he was kept, covered, as he was, all over with flakes of mud, and in every respect hideous to sight, so affected the lady that she could not stay longer at the "show." All during her pregnancy, she made frequent mention of the animal, which she spoke of as scaly—indeed, an indellible disagreeable impression was made upon her mind, which it was feared would be transmitted in some way to her offspring. When her child was born, it was the subject of ichthyosis in a most marked degree, which covered especially the parts of the body that had appeared to her to be the most affected in the hippopotamus.

If, however, these cases be attributed to accidental causes, the following cannot be so accounted for: Some years ago he vaccinated a very impressible lady in an early month of pregnancy. As is his custom, he used a needle, making straight scratches across the skin at the insertion of the deltoid muscle of the left arm. She was very nervous during even this minor operation, and on the slight show of blood occasioned by the scratches, she fainted. On her recovery, it was found that the sight of the wound upon her arm had made a very serious impression upon her mind, which lasted all through her pregnancy. In other respects, there was nothing abnormal about the vaccination. She time and again spoke to Dr. McC. about it, and notwithstanding his constant remonstrance and statements that nothing would be

apt to occur, she yet feared that some effect would be observable in her child. When the child was born, there was found upon its left arm, at the insertion of the deltoid, red multiple cross marks, in all respects like those made upon the mother with the needle, and as seen by her at the moment of her fainting, covered with streaks of blood. These marks continue upon the girl to this day.

Dr. F. B. Watkins did not think the subject a practical one. He has no faith in the doctrine of mental impressions causing "mother's marks," deformities, etc. How many hundreds of times do pregnant women witness terrible scenes and hear heart-rending news, as in times of war or great political commotion, etc., and yet how few deformities occur as a result! How often, on the other hand, do women express apprehension during their pregnancies, lest some mental impression should deform their conceptions, and yet the children are born without mark or blemish? Deformities, etc., then, when they occur, as they sometimes do after strong and lasting maternal mental impressions, must be classed as purely coincidental. He thinks the adoption of Dr. Joynes' views would be injurious if carried into practice; for the pregnant woman, with her susceptible nature, would scarcely go out on the street, or take sufficien t exercise, which seclusion, together with the depressing mental condition growing out of her fear of giving birth to a deformed child, would impair her nervous system and her general health seriously, thus rendering her more liable to abortions, or even to disease, while she would also be less able to resist its attack. He tells all his patients who ask about mental impressions, that they are merely the superstitions of a superstitious people. He has no fear, if occasion should require it, of availing himself of the assistance of a pregnant woman in setting a broken limb, or dressing even a horrible wound—certainly no fear on the ground of mental impressions as they may affect the fœtus.

Dr. W. W. Parker agreed with Dr. Watkins in personal experience and opinion on this subject.

Dr. J. S. Wellford also agreed with Drs. Watkins and Parker in the main; but he would not let his *enciente* patients witness bloody operations or painful scenes, because, if perchance they were to give birth to a child deformed, the parents or friends would at once, because of the popular belief on the subject, attribute the mark or deformity to the mental impression. Besides, he would fear the immediate consequences upon the mother herself, such as fatal syncope, etc., if sad news was suddenly told her, or if she was subjected to horrible sights. Such things might also cause *arrest of fœtal development*, and thus cause deformities, but not *mother's marks* in the true sense of the term.

Dr. L. B. Edwards had thought Dr. Joynes's views were almost universally conceded at the present day. He is now attending, with Dr. Hunter McGuire, a child with club foot, which is attributed to the sudden fright which the mother received. One night while coming down stairs, a young lady visitor playfully seized her by the ankle, which, in the darkened hall, terribly frightened her. On another occasion during her pregnancy, she saw one of her other children suddenly break through a cane bottom chair. The little boy's feet seemed to hang in the chair as it fell over, which caused great alarm lest he had injured himself severely. Coincidently the *fœtus in utero* seemed greatly agitated as determined by the more violent and rapid "quickening." The impression made, however, could not be gotten rid of during her pregnancy.

About a year ago he saw in this city a negro boy about 6 years old said to have been born with only one arm, which the mother attributed to the impression made upon her by the sight of a man who had received an injury resulting in the loss of his arm. He had never made a close examination of the stump.

But the following instance, told him a year or ago, by a gentleman, in every way reliable and competent to observe, had removed all doubt in Dr. E's mind as to the occurrence of such events: During the days of slavery, the farmer had occasion to punish one of his young house-maids for running away, stealing and lying. While whipping her, his wife, at the time pregnant, but whose sympathies had become enlisted, rushed into the room to intercede in behalf of the girl. While there she saw the stripes made by the switch upon the girl's shoulder. They made a strong and lasting impression upon the wife's mind. When she was confined, her infant exhibited marks upon her shoulders corresponding to those witnessed by the mother on the negro. How else account for this latter case except on the doctrine of maternal impressions?

Dr. O. Fairfax has never been a believer in maternal impressions. But the array of facts and arguments presented by Dr. Joynes has, perhaps, modified some of his former views.

Dr. J. G. Skelton has never himself seen an illustration of the principles set forth by Dr. Joynes. When, however, he was a medical student years ago in Philadelphia, his Professor of Obstetrics stated he had been altogether skeptical on the subject until he had met with three cases in rapid succession, which satisfied him as to the influence of maternal impressions. Dr. S. himself scarcely knew how to express his views on the subject. Perhaps he would adopt Dr. Coleman's speech as his own—only he was not quite so incredulous even *in the day time* as Dr. Coleman. He would certainly on all occasions keep his patients

during their earlier months from anything that would be apt to make an unpleasant lasting mental impression.

Dr. Joynes stated that he was physically unable to-night to reply to the objections that had been made; but he had just been handed a note stating that on last Sunday night Dr. George H. Bright, of this city, had delivered a woman of a dead child whose head in all respects looked more like that of a cat than of a human being. This is attributed to the fact that during an early month of pregnancy the lady was frightened by a cat, and which made a lasting impression upon her mind. She often referred to the circumstance before the child's birth.

Book Notices, &c.

A Treatise on the Diseases of Infancy and Childhood. By J. Lewis Smith, M. D., Physician to the New York Infants' Hospital, etc. Third edition, enlarged and thoroughly revised. With illustrations. Philadelphia: Henry C. Lea. 1876. Pp. 724—xvi. (For sale by West, Johnston & Co., Richmond.)

The editor's chair is "easy" this month, as it always is when everything to be said regarding the publications on his table is favorable. In this department, we may sometimes err in the estimate of the value of the works noticed, but no one can strive more to give candid expressions to honest opinions.

But all this aside, Dr. Smith's *Diseases of Children* is certainly the most valuable work on the subjects treated that the practitioner can provide himself with. His great advantages for observing diseases in children and the results of treatments adopted, growing out of a singularly apt train of official position as physician to foundling asylums, infants' hospitals, and to the divisions of dispensaries for children's diseases, together with his recognized talent for making analyses, classifications, and deductions, justly give him the position of eminence as an author.

In this third edition, rötheln and cerebro-spinal fever are considered for the first time by the author in his *Treatise*, and the article on diphtheria has also been almost entirely rewritten. Indeed all through the book, the indications of thorough revision, in keeping with the latest established views, are marked. So that the recommendation in our January No., regarding Leishman's *Obstetrics* is equally applicable in substance to the volume before us, viz., that as it is fully abreast with every advance, it should be in the hands of practitioners generally, while because

of the conciseness and clearness of style of writing of the author, every professor of Diseases of Children, if he has not already done so, should adopt this as his text book.

Medical Diagnosis, with Special Reference to Practical Medicine. By J. M. Da Costa, M. D., Prof. Practice of Medicine, &c., Jefferson Medical College, etc. Illustrated with engravings on wood. Fourth edition, revised. Philadelphia: J. B. Lippincott & Co., 1876. Pp. 835. (For sale by West, Johnston & Co., Richmond.)

The practitioner without Da Costa's *Medical Diagnosis* is like the college student who begins the study of Medicine without Dunglison's Medical Dictionary. The work is simply invaluable. The familiarity of the profession with the three editions already exhausted make it unnecessary to give an extended notice of this fourth edition. The revisions to be found in this last edition are especially in the chapters on fevers and diseases of the nervous system.

We are glad to notice that the author in his chapter on *Hemorrhagic Malarial Fever* refers to the papers of Drs. W. A. B. Norcum, and T. C. Osborn as among the most valuable publications on the subject. He might also have referred to the paper by Dr. D. R. Wallace in like complimentary terms. Dr. Da Costa himself believes the dark colored urine discharged in this disease to be bloody. Notwithstanding the great number of papers that have been written on this curious disease, there is room for more literature to settle some other important points.

Without, however, undertaking to notice special chapters, such as those on cholera infantum, cholera morbus, and others, regarding the nature of which there are grounded differences of opinion, the author is so desirous to make his work eminently practical that he sometimes lets his pen lead him somewhat beyond the intentional limits of his design as indicated on the title page, and ventures to lay down the indications of treatment. But this only adds another mark of interest to the work.

The typography of the book is beautiful. Why there should ever be a preference for English publications, when America can present so much more elegant specimens, we cannot understand.

Extra-Uterine Pregnancy—Its Causes, Species, Pathological Anatomy, Clinical History, Diagnosis, Prognosis, and Treatment. By John S. Parry, M. D., Obstetrician to Philadelphia Hospital, etc. Philadelphia: Henry C. Lea. 1876. Pp. 276—xii. (For sale by West, Johnston & Co., Richmond.)

We do not know when we have been so highly entertained as

during the reading of this monograph. Every line is of interest—except the innumerable foot-note references to authorities, &c., which sometimes distract the attention of the reader just at the moment he becomes most interested. But these foot-note references are becoming fashionable—or have long been fashionable—and perhaps we should not complain of them.

The author bases his work upon the analysis of 500 cases of extra-uterine pregnancy selected from various sources. The character of the book s fully indicated by the title. The work will hereafter be the authority on the subject.

Under the head of *Treatment of Tubo-Uterine Pregnancy*, we find a report in full, never before published, of a very interesting case in which Dr. Lenox Hodge adopted a novel but rational procedure resulting in a live birth at about the 8th month of fœtation, and maternal recovery. The diagnosis appearing to be probably correct, (made after consultation with his father, Dr. Hugh L. Hodge, whose name will ever be revered), Dr. H. Lenox Hodge performed the operation, Friday, Oct. 28.

"The os uteri was dilated by means of Barnes' dilators. They acted efficiently; and as the os dilated, labor pains began. Owing probably to uterine contractions induced in part by the examination made on Tuesday, and in part by the forcible dilatation of the os to-day, the sac containing the fœtus had greatly descended, and approached the os. Ether was administered by Dr. Hutchinson. Upon auscultation of the abdomen, the fœtal heart was still heard, though the sounds were feeble. The urine was withdrawn by a catheter. Then scratching through the structures covering the fœtus, I extracted the child, presenting the breech, by passing a blunt hook over the thigh. It was the right sacral posterior position of the breech. The placenta was also easily delivered, and with but little hemorrhage.

"After birth, the child soon began to breathe, and its color became perfectly good. Its circulation and respiration, however, were feeble, and it only lived about ten hours. The development of the child was moderately good for a fœtus of eight months."

The treatment of the mother during the three weeks following (after which she returned to her country home,) consisted of diaphoretics, anodynes and tonics, including sulphate of quinia, as the symptoms seemed to demand.

In connection with the section on page 141, *Pregnancy while carrying an Extra-Uterine Fœtus*, we might refer to the case recently imperfectly reported in the *Monthly* (Dec. 1875, p. 675). This case, of which we happen to be personally cognizant, would bear a more detailed report than we have given it, as there are several points of interest in it.

The Physician's Combined Call Book and Tablet, just issued by Dr. Ralph Walsh, Washington, D. C., is an improvement on other "Visiting Lists" that have come under our notice. It is equally adapted to the demands of the doctor who, weekly, has as many patients as he can attend, and to the other doctor who, weekly, could attend many more patients than he has. It contains a calendar from January 1876 to June 1877 inclusive, and is so arranged that entries may be begun at any date. It also has an erasable tablet, very convenient for memorada, tables of doses for laudanum, of important and new remedies, of drops of various fluids to the fluid drachm, of doses for children, poisons and antidotes, etc. It is convenient in form and size for the coat pocket, being $7\frac{3}{4}$ inches long and only $\frac{3}{8}$ inch thick. Price $1.50.

Archives of Dermatology, a Quarterly Journal of Skin and Venereal Diseases. Edited by L. DUNCAN BULKLEY, A.M., M.D. Volume I. Pp. 384. New York: G. P. Putnam's Sons, 1875. (For sale by J. W. Randolph & English, Richmond. Price $3 per annum).

We return thanks for a beautifully bound volume of this most excellent journal.

Editorial.

CORRECTIONS.

While we were persuaded, with the lights before us at the time of writing the editorial in our last number (January, 1876), on *Politics in Medical Appointments*, that our remarks were just, we have since been informed by members of the present Board that neither the action of the Governor of Virginia, nor that of the Board of Directors, recently appointed, in displacing Dr. Brower from the Superintendency of the Eastern Lunatic Asylum was caused by political considerations. We therefore wish to withdraw any censure of the Governor or the Board of Directors which may have been implied in our remarks. No one can be more willing than we to correct an error when informed that we have committed it.

Also, on page 730 (Dr. Harvey L. Byrd's article), 14th line from bottom, read *alibique* for *ablique;* and 4th line from bottom read *15th century* for 11th.

JOURNALISTIC.

There is scarcely a mail that does not bring a letter of this kind: "Everybody is delighted with your journal, but I can't get the doctors to subscribe to it or to any other journal. They depend solely upon the few text-books they used before the war for all their information, and but few read them." One subscriber wrote us that he was the only doctor in his own or in the four adjoining counties (containing some 30 odd doctors) that took any form of medical literature!

In view of this apathy or neglect, is it to be wondered that there should be such wide spread ignorance in the rank and file of the profession? How can such parties dare undertake the responsibilities of the true physician, who do not keep their lamps constantly trimmed and burning? Should this note be read by any practitioner who is making no effort to keep himself posted in medical matters, we hope that it will bring upon him a sense of his duty to himself, to his patient and to his profession; and that, turning over a new leaf with this national centennial, he will at once avail himself of every opportunity to become proficient in his profession, and thus more useful as a citizen.

There is no way by which this proficiency can be better gained than by the careful reading of two or three good practical medical journals. If the party cannot do more, let him take *one*. Whether this be the *Monthly*, or some other journal with which he is better pleased, is a matter of secondary importance. But for the sake of humanity, take some one of the fifty odd respectable and excellent journals published in this country. We are in earnest about this matter; we hope that each physician will likewise become interested, and urge upon his neighbor the importance of our recommendation. We have not the space to name the journals that may be recommended. One can scarcely go wrong in selecting any medical journal published in this country.

The Louisville Medical News is the new, live, excellent medical weekly which began in Louisville, Ky., Jan. 1st, 1876—Drs. Cowling and Galt, editors. We have received the first five numbers; they are all first-rate; but each succeeding number has been better than its predecessor. Each number contains 12 quarto pages, double column, well printed. Price $2.10 per annum. John P. Morton & Co., publishers.

The West Virginia Medical Student continues to grow in excellence and favor. The typography is beautiful. Dr. Reeves, the editor, deserves great credit for falling so handsomely into line.

The American Medical Weekly and the **Richmond & Louisville Medical Journal** have each put on a new suit. As a journalist, their editor, Dr. Gaillard, as every one knows, is a great success.

The publishers of the *American Practitioner*, of Louisville, Ky, which is a regular stand-by on our table for solid articles, &c., have requested exchanges to be forwarded to the editor, Dr. Theophilus Parvin, Indianapolis, Indiana.

The Mortuary Statistics are omitted because of the pressure upon our columns. Besides, the Health Office of Mobile has been destroyed by fire during the month, and Dr. Bizzell writes that he has been unable to make up his report because of the confusion immediately following the fire.

John G. Shuttleworth, M. D.—At a special meeting of the Pensacola (Fla.) Medical Society, held Jan. 8th, 1876, the following preamble and resolutions were adopted:—

Whereas, it has pleased Almighty God, in His wise providence to call from our midst our esteemed friend and associate, Dr. J. G. SHUTTLEWORTH.

Resolved, That in this mournful event, we recognize the wisdom of Divine Providence, and bow humbly in submission to His will.

Resolved, That in the demise of our brother, we are deprived of one whose noble and generous character had won our highest esteem, and that while mourning his loss, we shall ever cherish his memory.

Resolved, That we deeply sympathize with his relatives and friends in their affliction.

Resolved, That as a last tribute of respect to his memory, we will attend his remains in a body to the cars, which is destined to transfer them to the far North to be interred by the side of his deceased father.

Resolved, That the usual badge of mourning be worn by us for thirty days.

Resolved, That a copy of these resolutions be transmitted to the family of the deceased, and to the Long Island Medical Society of Brooklyn, and published in the Pensacola newspapers, *Virginia Medical Monthly* and *N. Y. Journal of Medicine*.

R. B. S. HARGIS, M. D., *Pres't.*

J. C. WHITING, M. D., *Secretary.*

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Original Communications.

ART. I.—*Fever.* By JOHN L. COOK, M. D., Henderson, Ky. (Read at fourth regular semi-annual meeting of the "McDowell Medical Society," at Henderson, Ky., December 8th, 1875).

Fever embraces many phenomena worthy of our most earnest attention, and the object of this paper is to present as many new lights on the subject as possible, and generalize as many facts as can be obtained. Hence, as a basis for the succeeding remarks, the following proposition is submitted: *Temperature above that which is natural shows "the patient to be really bodily ill."*

In the first place, it will be necessary to elaborate points which have quite a practical signification. Mysteries must be unveiled, and hidden truths made patent to the most careless observer. All this can be accomplished in but one way. That way is to rely on the vast discoveries in physiology, which have done so much to clear away obscure places in clinical medicine, to place physiology on the road to other valuable improvements, and finally to supplant expectant by rational treatment.

Fevers may be classified as idiopathic and symptomatic; first, then, the nature of fever, its causes and its treatment, will claim our attention.

Fever, as has been said, is an elevation of temperature above that which is natural. This, though a very brief definition, is doubtless as good as can be presented. But, as a usual thing, the pulse will be accelerated, while at the same time its force will be augmented; respirations increased in frequency; bowels constipated, appetite gone, tongue furred, skin dry, and urine scanty. In fact, all the secretions and excretions will be more

or less suspended, to which may be added various nervous derangements.

Of course the rule laid down has many exceptions. But without bestowing too much attention on the preceding remarks, we propose to enter at once into the merits of the subject, which will enable us to state a line of treatment for fever based on deductions made with reference to its causes. This we conceive to be rational; this we concieve to be based on common sense and sound judgment; this we conceive to lay at the foundation of successful treatment. It is very plain that if we can understand the evolution of heat in all its bearings—in all its relations to health and disease—the practice of medicine will be brought down to such a range that guess-work must give way to investigation, that blindness must yield to light, that ignorance must cower before science, and that death itself, in many cases, may be prevented from a seizure of some seemingly intended victim; and, instead of these, health, vigor and physical perfection will stand as prominent attestations of the progress of medicine.

As is well known by scientists, there are two main sources for the generation of animal heat: first, that which depends on the *general* circulation; second, that which depends on the *local* circulations over which the vaso-motor nerves of the parts preside. These two circulations are quite independent of each other; but more touching this point further on. For the present, reference is made to the general circulation.

In Flint's *Physiology*, under the head of Nutrition and its relation to animal heat, as influenced by respiration, will be found the following passages: "As far as the general process is concerned, the production of heat is usually in direct ratio to the consumption of oxygen and the elimination of carbonic acid. In the animal scale, wherever we have the largest amount of heat produced, we observe the greatest amount of respiratory activity." As heat is produced in direct ratio to the quantity of oxygen consumed, it surely must bear a very near relation to the number of respirations, for these acts are to take oxygen into the system. Furthermore, it is well known by every physician that whenever the respirations are increased beyond the normal standard the pulse is also generally increased in proportion, subject to certain modifications in various diseases. Besides, it is

well known that in essential fevers, as well as in inflammatory fevers, there is generally acceleration of both respiration and circulation. And more, Dr. Hartshorne, in his *Essentials of Practical Medicine*, says: "A rise of temperature 1°F., corresponds, as a rule, with a pulse increased eight or ten beats per minute." Wunderlich proceeds further, and lays down rules regarding the relation of pulse and temperature that confirm the quotation just related. Dr. Aitken maintains the same position; so do Liebermeister, Fordyce Barker, and all medical writers of the present day. Without citing another authority, or going into further details, we propose to rest this point just here, believing, if we thoroughly comprehend the ground work, we are prepared to follow our profession upon common sense principles—principles that will guide us in the right direction and keep us from running aground on the sand banks of false theories, false ideas, and false practices.

By knowing what health is, we can readily understand disease. By understanding the cause of disease and its pathology, the way is clear for sound physiological therapeutics. By basing everything upon sound therapeutics, the way is paved for the death of expectant or empirical treatment. And here we must say, the time, in our opinion, has passed when any complaint should be left to its natural laws, so far as severity and duration are concerned; for we utterly dissent from such views for many reasons, which we cannot touch to-day.

It seems to us the evidence fully establishes the fact that increased activity of the heart, with accelerated breathing, whereby there is an excessive quantity of oxygen conveyed into the general circulation, will increase febrile heat. Such was the common view, perhaps, of the old practitioners; and this led them to bleed and resort to other antiphlogistics, which we think in the main correct.

We now come to treat of the influence of the vaso-motor nerves on the local circulations in different parts of the body, so far as they relate to inflammation and fever. There is an intimate relation between them. Dr. H. C. Wood says that fever belongs to the neuroses; and in this essay our object is to prove that not only fever depends on perturbations of the nervous system, but that the same is also true of inflammation.

It is admitted by physiologists that the local circulations are independent of the heart. For example, blushing results from a dilatation of the blood vessels of the face independent of the heart's action. The well-known effect of section of the cervical sympathetic nerve of an animal, leading to congestion and increase of temperature on the side of the section, is familiar to members of this Society. These results follow without affecting the heart in the least. Even the functions of the glandular organs are under this complex nervous arrangement in the walls of the vascular system. Then, as a connecting link, the authority, both of Flint, Jr., and Wunderlich, is adduced that, in inflammation, the temperature may be raised in the parts involved when there is no general disturbance of the system. But, to carry the idea still further, it is well known that in inflammation there is an increased amount of oxygen going to the part, and more carbonic acid coming away, than where the structures are healthy,—all of which shows that increased combustion takes place in the inflamed structures. So it is in fever. Therefore, in addition to arterial excitement, as a means of causing fever, the foregoing demonstrations prove that caloric in health, as in disease, partly depends on the influence of the vaso-motor nerves.

To cover all practical points, from what has been said, it becomes necessary to govern both general and local circulations. For example, a favorite prescription of ours in pneumonia is this: ℞. Tinct. veratri virid., gtt. xxiv; quiniæ sulph., gr. xxx; morphiæ sulph., gr. j; syrp. simplicis, ʒvj. ℳ. S. Teaspoonful from two to four hours. If the pulse become weak under its influence, ammonia should be added to give it volume. Ergot is also sometimes used. Two patients with pneumonia have been thus treated in the last week, in conjunction with Dr. J. B. Cook. With what result? We are compelled to say it has never failed to do good in our hands, and much good at that, when early administered. The veratrum brings down the pulse, the quinine and ergot diminish the calibre of the pulmonary blood vessels in the engorged lung; they all lower febrile heat; and morphine relieves pain, secures rest and sleep. The system is brought back to its healthy moorings, and Nature's laws resume their wonted ways. The onward march of morbid changes is arrested; the patient turns his face to recovery and health. We may con-

fidently expect him to improve without delay. No special drugs should be entirely depended upon under all circumstances, as any means which look to the same end may do; but whatever is determined upon, let it be done well, as no half-way business will reach the case. In fact, it is more than folly; for it is our duty to have definite ideas as to causes, as to pathology, as to treatment, and meet the responsibilities accordingly.

Let us now turn our attention to fever. It must be borne in mind that many patients are actually consumed by oxygen—*burned up*. Understanding how this is accomplished, we have valuable guides as to the means of preventing disastrous consequences by partially suspending the active forces leading to such evils.

If an excessive quantity of oxygen carried into the general circulation will augment heat in animals in health, it certainly may be safely stated that it would also increase heat in disease; for this, we should think, would be the legitimate conclusion, as resting on cause and effect. So in many examples of fevers the destruction of the ultimate particles of the organization in rapid changes by oxidation, or other chemical processes, induce dangerous degrees of temperature. Austin Flint happily disposes of the matter in these words: "According to recent views, fever—in other words, the preternatural heat of the body—is not merely an effect of morbid processes, but it is causative of functional disturbances, together with important changes in various organs; and it is eminently the source of danger to life. It is the heat of the body which kills, and therefore, on the withdrawal of heat, serious results may be forestalled and life saved."

Dr. L. P. Yandell soon afterwards presented to the profession an able article *On the Use of Cold Water in Fevers*. He only spoke of cold water as a valuable agent in subduing fever, while our paper covers all measures known to art which look to the same end. If abnormal heat destroys life, then any measures which abate fever will be the means of preventing death. This is so clear, so evident, so true, that any physician who fails to use efforts to control the pulse, the molecular changes, the temperature, by appropriate measures, is just standing quietly by and letting his patient be destroyed. He is as fully culpable as were he to stand by and witness him consumed in actual flames

without making an effort to save him from ruin. Hence, sedatives should be early employed before any structures become irreparably damaged.

This brings up the consideration of a question which for years past has been the subject of a great deal of discussion, viz.: The antiphlogistic and stimulating treatments. One party assumed that febrile disturbances were obviously designed for good, and due caution should be exercised with regard to their abatement by any means which tended to lower the system, as in so doing the death rate was decidedly increased. The other side as firmly advocated that all febrile excitement exhausted the system, and so increased the chances of death. The views before advocated by the writer have been that exhaustion by excessive action is just as detrimental, just as dangerous, as any other morbid process by which death takes place; that sedatives prevent excessive action, and so lessen the danger of mortality. Many assume sedatives to be opposed to the laws by which nature works out her own restoration; but we believe nothing could be more fallacious, more calculated to lead to evil consequences.

Before drifting too far from the point in question, it may be here safely contended that in all departures from health the grand object to be attained is to restore everything to its original condition—health. So when there is fever, no matter from what cause, it should be reduced immediately; and there are many modes by which this may be accomplished. It is an old saying of ours, that the pulse and temperature must be reduced to the normal standard, and there held; for whatever inclines to restore the body to the natural state, tends to cure the patient. So when the pulse is above normal—when it beats with force and power, when there is an elevation of temperature—it seems ordinary judgment would suggest that they should be brought down to the normal state. This, it must be remembered, does not exhaust the patient, but prevents exhaustion.

Should the position in this article be the correct one, in all essential fevers that cannot be arrested by quinine, the sedative treatment is that which promises most to the patient. Arterial sedatives partly meet the requirements, but they should be used with discretion, and not when there is exhaustion. Prominent among the last stand blood-letting, veratrum, aconite, bella-

donna, nitrate of potash, tartar emetic, ipecac, gelseminum, cold baths, including packing in wet sheets. Caution must be given to be sure to govern their use at all times and under all circumstances. But again, sedatives do away with the old remedies, diuretics and diaphoretics, to the extent they were given in olden times. Dr. Geo. Bayles, of New York, resorts to tartar emetic, ipecac and nitrate of potash, in sedative doses, in scarlet fever, with the most salutary and happy effects.

Now what can be done to supersede the use of diuretics and diaphoretics? Why, just give the patient veratrum viride in full doses for an hour or two, and you will bring the pulse and the fever down to a certain extent, when the secretions and excretions become free of themselves. The way is quick and short. Other agents of the same class may be substituted if desired.

But one may say these powerful arterial sedatives will not in all cases reduce the fever; that in despite of them it will in some instances remain high. This is true, and it is in accordance with the views already advocated in this paper, viz.: there are two sources from which fever originates—first, the general circulation; second, the different local circulations. These latter, too, we are free to say, are sometimes difficult to control, especially in many cases of scarlet fever and typhoid fever; yet there are means which materially control them in either particular, and foremost may be reckoned the wet sheet.

But it is, perhaps, best to rely on measures for both conditions—arterial sedatives to control the heart, and so the amount of heat caused by *cardiac excitement;* and, secondly, though of great value, agents to control the molecular changes taking place everywhere, and which doubtless depend on general dilatation of all the blood vessels in fevers, and therefore increased oxidation of the tissues; and if this be true, we wish something to lessen the calibre of the capillaries throughout the frame in all fevers, and thereby prevent the excessive production of heat. Is not this a plausible view of the question, and one deserving more attention?

It appears, from various data, the day is not far distant when measles, scarlet fever, typhoid fever, and other diseases of a similar nature, will be very considerably abridged in duration as well as severity—perhaps aborted. When this desirable end is attained,

it will be by a more thorough knowledge of the causes, the pathology, and how to check the combustion in the tissues, through the influence of the vaso-motor nerves. Because we have in the last few years discovered special medicines that will control the calibre of the cerebral blood vessels, and so reducing the treatment of many diseases of the brain to a rational basis, we should not, therefore, stop here; but go forward in the vegetable and mineral kingdoms in search of other medicines that will specially constringe the pulmonary blood vessels, as well as others in different organs of the body. While therapeutics is somewhat limited in this respect, yet ergot possesses general properties in this way, and would therefore be indicated in all acute inflammations in the congestive stage before exudation, as well as in essential fevers, with the object in view of diminishing the capacity of the capillary circulation. Quinine in large doses must act in the same way through nervous influence; thus it becomes a potent drug as a sedative, arrests inflammation, and cools fever. Cold water, too, is an auxiliary in the form of baths, effusion or wet sheets, to reduce preternatural heat. Here it has a double influence: first, it contracts the capillaries most speedily, thoroughly and effectually; secondly, it directly abstracts heat from the over-heated body, and so prevents destructive changes; and for this purpose patients may be kept in tepid or cold water many hours during an attack of typhoid, scarlet or other fevers. This practice is quite in vogue now in Germany, and we think the plan full of comfort, of utility, of wisdom, of science, and of good results. It allays excitement; it reduces fever; it soothes pain, quiets restlessness, and makes way for recovery. What wonderful success has followed this practice! Brand, of Stettin, Germany, cured 170 cases of typhus fever in succession with it. Over 60 patients with typhoid fever have been saved recently in Mt. Sinai Hospital, New York, with a loss of but a single one. Yet with all this evidence, many men cannot believe. They will live and die blind.

We must now refer to another state, a quasi febrile movement, "*biliousness*," which is the great reef conjured in the minds of some practitioners, over which they have spent many sleepless and restless nights—which have worn away their lives, because so many patients, with their portal circulations out of fix, have

been lost. Such a delusion is something like a mirage which is presented on an arid desert, when far in the distance there seems to be water, which causes the sufferers to press forward to certain destruction.

If a patient be afflicted with malarial fever, the bile may regurgitate into his stomach. If he be constipated, and not sick enough to be confined to his bed, he is "*bilious.*" Then will you treat his symptoms? or will you treat his disease? If the former, go according to the old exploded idea, and give him calomel; that may help him. But would it not be better to drive a stunning blow at the disease? Give quinine and destroy the cause; and the *biliousness* itself will readily yield. Strike at the cause, and not the effect. Destroy the malaria completely, and the secretions and excretions will soon come right. If they do not, they can be easily remedied. In our practice, we never propose to continue such cases more than three days at the outside limit, and this, too, without bothering ourselves about the bowels—except we may now and then use a gentle cathartic.

In essential or inflammatory manifestations of fever, with the mouth dry, the skin harsh, the bowels constipated,—with the secretions scant in general, because the excitement of the system is above the secreting point—when you lessen the tension, so to speak, calm the excitement, you merely bring the human machinery to such a state that the organs can again perform their functions properly; hence, the mouth becomes moist, the skin bathed in perspiration, the urine abundant, and the bowels free. These are facts upon which it is well to meditate. There would not, therefore, if this course be pursued, be any special demand for diuretics, diaphoretics, cholagogue cathartics to arouse the secretions—a cloak for ignorance when the trouble is not understood.

When you wish to deaden a tree, you do not go pruning among its topmost twigs, but you strike your blows deep and heavy at the root; so when you wish to abate fever, do not go pruning in the branches of the disease, metaphorically speaking, with effervescing draughts, sweet spirits of nitre, or other feeble diuretics, refrigerants and diaphoretics, but resort to potent measures at once—such, for example, as veratrum, quinine, the wet sheet, to control the general and local circulations, upon whose depar

ture from health the fever depends. Does a partial suspension of the secretions arise from the fever? Or does fever arise from their suspension? Is not the former idea the true one?

But while this is correct, as a rule, yet it is well known that symptoms may aggravate the pathological condition and require special care and attention. The specific poisons which enter the circulation bring on the fever, and the fever brings on the torpid state of the secretory organs. However, it is always important that the excretions should be carefully watched for physiological reasons. To throw out a practical suggestion, if the skin be so dry and harsh that perspiration is deficient, oil the person thoroughly from head to foot, and it will cool his fever. Take a patient, whether young or old, with typhoid fever, if you please; he has rested badly all night; has tossed from one side of the bed to the other; has dreamed about all sorts of frightful things; has had short naps, which fail to refresh; has in a measure become worn out, peevish and fretful. Now just annoint him well with lard or glycerine, and, our word for it, he will thank you to the latest day he lives. He will rest; he will feel better; he will sleep; he will be calm; and he will likely improve in every respect.

According to the old view, you treat the results; according to the new, the disease. On the one hand, the recovery is slow; on the other, rapid. Upon the former idea, Dr. John Esten Cooke ascribed all malarial diseases to congestion of the portal circulation, which required only to be relieved by his famous pill, composed of calomel, rhubarb and aloes. Yet with all his acumen, his great learning, his great ability as a writer, his great attainments as a scholar, he failed to treat the diseases as thoroughly, as scientifically, and, above all, as successfully, as the humblest doctor in the land at the present day. Why so? For obvious reasons. Because he treated the effects of the disease, whereas everybody now treats the disease itself, kills the malaria, and the patients are up in two or three days; while under Cooke's plan they were down for as many weeks, were salivated twice over in many sad instances, which rotted away the gums and cheeks, and ruined the constitutions. To dwell further on this vital question, as it is one of great moment, an illustration may not be inappropriate. Why worry ourselves with clearing the

branch while the spring is still muddy? Our work will be lost as its turbid condition will doubtless soon obtain again. Or, in other words, why treat the consequences of disease while the causes are still in operation, and the pathological state still in progress to revive again the evils—the results of the malady? Clear the fountain, and the stream becomes clear also. Destroy the cause of disease, cure its pathology, and its long train of morbid effects soon cease.

Many years ago it certainly would have been presumptuous, according to the views of the profession, for one to have announced, that, in a short while, all malarial fevers would be aborted in two or three days; and with the facts before us, it may, without any impropriety, be stated that the time will soon come, if not already here, that the miasmata which generate scarlet fever, measles, small-pox, and others of this class will demand our earnest research with a view to a thorough understanding of their essential qualities, so that they may be as effectually destroyed in the system by appropriate antidotes as vegetable malaria is by quinine.

The first great principle taught is, in all febrile complaints, remove or destroy the cause; and when this is done, we may expect defervescence and a speedy issue of all the troubles. If this be true, these diseases should be frequently arrested before the eruptions make their appearance, as some one has recently advocated. However, removing the cause does not always stop the complaint, as it is well known a person may be exposed to a chilling draught of wind from which he contracts pneumonia, but as soon as he gets into his room again, the cause is gone; nevertheless, the pathological condition passes through certain natural changes, if not relieved by proper medication.

If our memory serves us rightly, it was Bennett who said, fever was dilatation of the blood vessels. If this be accurate, the treatment given in this paper, namely: cold baths, quinine, ergot, belladonna, etc., to diminish preternatural heat by contracting the capillaries, would be most judicious, quite practical and eminently successful. But as these pathological manifestations of fever, as other diseases, hinge on definite causes, so, too, the poisons must be neutralized when their natures are comprehended; and further it is our affair to comprehend their natures, and when

discovered never rest till the proper antidotes are administered, when the poisons become resolved into new and inert elements and pass from the system through the different emunctories, leaving the pathological results more easily to be managed—thus placing ourselves at the outpost of progressive medicine—boldly pronounce that proper remedies, in proper doses, at the proper times would cure all acute affections.

The chief thought set forth has been to reduce fever by resorting to sedatives; but when exhaustion is established, stimulants, tonics, nutrition must take their place. Exhaustion in fevers would be sufficient for an extended article, but it is beyond the scope of this paper. But as digitalis possesses the therapeutic property of diminishing the frequency of the heart's action, and also of giving it power and tone, besides reducing temperature, this drug in conjunction with quinine and ammonia would therefore be imperatively demanded in all diseases of exhaustion when the pulse beats too feebly and too frequent. Fordyce Barker clearly makes the just discrimination when he holds that veratrum will control the pulse of excitement, digitalis the pulse of exhaustion.

ART. II.—*Puerperal Eclampsia Successfully Treated by Enemata of Chloral Hydrate.* By JOHN L. HARMANSON, M. D., Pungoteague, Accomac Co., Va.

Of the many new remedies, hydrate of chloral is not the least useful. It is not my purpose to speak of its various useful applications, but only of its happy effects in convulsions, and especially in puerperal eclampsia.

I write from memory, and at the earnest solicitation of a medical friend.

CASE I.—On May 1st, 1874, I was requested to visit a negro girl about 17 years old, in labor, and having convulsions. I saw her about 3 o'clock P. M., and found her struggling with a violent fit. Her pulse being full and firm, I bled her copiously, and left an active purge, to be given as soon as she was sufficiently restored to take it. Having other cases requiring my attention, I left her in the care of a midwife. About midnight I was aroused and earnestly begged to see the girl again, the fits having returned. Upon inquiry, I learned that the child

was born at sunset, since which time the convulsions had been recurring with increasing violence. Shortly after my entering the hut, at 1 o'clock at night, she had a terrible seizure. The attacks had been increasing both in frequency and violence. There was no return of consciousness in the intervals. I determined to try chloral, and accordingly injected into the rectum one drachm. I remained with her two hours. There being no return of the convulsions, and she sleeping quietly as a healthy babe, I left her. The following evening I saw her again, and learned that she had slept until noon, when she awoke, seemingly as well as most women after child-bearing.

Case II.—On May 19th, at 2 o'clock at night, a respectable negro man requested me to visit his wife, who was, he said, in labor, and having fits. I hastened to her relief. She was 18 years old, and in labor for the first time. The convulsions were frequent and violent. During the intervals, there was an imperfect return to consciousness, and an interminable effort to talk. Although naturally a vigorous woman, her pulse was rather feeble. I did not bleed, but I used chloral, as in the previous case. The effect was happy. She had not another convulsion, and slept quietly, except at every recurring pain there was a slight tremor of her hands. She was delivered at 10 o'clock A. M., fell into a profound slumber, awoke refreshed, and had a good getting up.

Case III.—Six o'clock on the morning of April 6th, 1875, I was called to Mrs. A., a lady of this village; age about 22; primipara. Being a young and healthy woman, with a roomy pelvis, and the presentation being such as I desired, the case progressed, causing me no particular concern. About 2 o'clock P. M., when in the last throes of labor, her head and eyes turning to the right, quick as thought she was seized with a violent fit. The attack was sudden and unexpected to me, and so astonished and unnerved her friends as to cause them to lose all presence of mind. The confusion of the moment having somewhat subsided, I succeeded in getting a cord, tied up her arm, and drew blood, *pleno rivo*, until the pulse flagged. She lost, I suppose, thirty-six or forty ounces. Consciousness returned, and she was soon delivered. My hope was that her trouble was now ended; but in this I was sadly disappointed; for within an hour the convulsions returned. "What is to be done? She cannot afford to lose more blood; bromide of potassium is slow in its action; I would end your trouble *now*." To this soliloquy I replied by throwing into the rectum, as soon as prepared, an injection of sixty grains of chloral. No more convulsions, but perfect repose followed. After a sleep of some

twelve hours, she awoke refreshed, but without any recollection of what had happened. In a few days she had an attack of metritis, which gave me much trouble. But she finally got well, and now promises to be the mother of many children.

I have treated other cases of convulsions with chloral, but it is needless to give an account of them, as it would be but repeating what I have already said. May be, in the experience which is to come, I may have cause for a more subdued reliance; but thus far in my experience, relief by hydrate of chloral in convulsions has been so prompt, so sure and permanent, that I now administer it in these cases with a confidence somewhat akin to that with which we give twenty or twenty-five grains of quinine to prevent an expected chill in intermittent fever.

ART. III.—*Chloroform in Obstetrics.* By R. L. PAYNE, M. D., Member of State Board of Medical Examiners, etc., Lexington, N. C.

The opinion is very generally held by the medical profession that chloroform is an uncertain and often dangerous remedy in surgical practice, but that it is comparatively safe in midwifery. This opinion is doubtless true, and being true, I fear it has led to the too general and indiscriminate use of chloroform in labor cases—many believing that it is even less dangerous than it really is. Many practitioners have assured me that they administer it in nearly every case of obstetrics, even though the labor be in all respects natural; and it is no uncommon thing to hear physicians say, "My patients will have chloroform in every labor."

Now this, in my opinion, amounts to a reckless and indiscriminate use of a valuable remedy! In fact, although I look upon it as an invaluable means of relief in many cases, still, the more I use it the more am I convinced that it is by no means as safe either to the mother or child as many suppose. I do not believe there is any use for chloroform in natural labor, nor do I think it should ever be resorted to *simply to annul pain*, unless the pain itself be a greater source of danger than the chloroform. But in eclampsia, in mania, in many obstetric operations, and under certain other conditions, its use is often highly

serviceable; yet, even in such cases, its benefits are often bought with a price too dear, either to the mother or the child.

I have for some years entertained the opinion that the use of chloroform predisposes the patient to post partum hemorrhage. I know that the vast majority of the profession do not agree with me; I know that many of the highest authorities believe it has no such effect, and have so taught; yet, from my own experience, I am very strongly inclined to the opinion that it does. Certainly the most terrible and most obstinate cases of post partum hemorrhage with which I have ever had to contend have followed the use of chloroform; and I think it very unreasonable for any one to suppose that a remedy which so effectually controls and relaxes muscular action, should withhold this peculiar power so far as the muscles of the uterus are concerned. Under the use of chloroform, even that hollow, involuntary muscle, the heart, not unfrequently ceases to beat, and many cases have been reported in which the uterine contractions of labor have been entirely suspended by its use, and have not returned again until the patient came from under its influence.

But I am not alone in the opinion that it predisposes to post partum hemorrhage. Robert Barnes, speaking of the use of chloroform in certain obstetric operations, says: "You must then carry the anæsthetic further to subdue all voluntary and *involuntary movements*, and to lessen the reflex irritability of the uterus. Then, but not always, you will secure *passiveness*, moral and *physical*, on the part of the patient; the *uterine walls will relax;* they will no longer resent the intrusion of the hand. These advantages are not, indeed, always obtained without drawbacks. A perfectly flacid uterus indicates considerable general prostration, and *predisposes to flooding.*"

On the subject of anæsthetics, Leishman says: "Partly on this account, and partly, it may be, in consequence of the effect which is produced on the nervous centres, it has been pretty clearly established that the indiscriminate use of chloroform or other anæsthetics *predisposes to hemorrhage after delivery.*"

If it produces such effects when carried to the surgical extent, will it not produce like effects, only in a less degree, according to the extent to which it is administered? If it relaxes the muscles of the uterine walls to any extent, no matter how little,

does it not to that extent predispose to post partum hemorrhage? I believe it does, because I have seen such inertia, such paralysis of uterine muscular tissue (even when the anæsthesia was by no means complete), that ergot and all other oxytocics failed to arouse the womb again to action; and I freely confess that I always am more fearful of hemorrhage after it has been used in any case of midwifery.

Nélaton says, turn your patient's head downwards when death is threatened by chloroform; and our own Dr. J. Marion Sims assures us that "the efforts of parturition cause cerebral congestion, which counteracts the tendency to syncope from chloroform." This would make it all appear exceedingly safe in labor cases, were it not for the fact that chloroform does not always kill by syncope!

It really seems clear to my mind, even if Nélaton's theory be true (and I have no doubt it is in many cases), that the use of chloroform can never supply the place of venesection in certain cases of puerperal eclampsia; because, if it produces syncope or anæmia of the brain, it cannot do so without increasing the amount of blood in important organs already congested. Not so with the lancet. If we abstract a given quantity of the "liquid flesh" because of a cerebro-spinal congestion, the said quantity is not added to the load which already embarrasses the kidneys, the lungs or the heart.

Anæmia of the brain, caused most frequently by paralysis of the muscular tissue of the heart, is, perhaps, the most common mode of death from chloroform; but it may destroy life also by coma, asphyxia, and by gastric irritation; although it is less liable to affect the stomach than ether.

Again: the investigations of Dubois, Zweifel and some others, show conclusively that the anæsthetic administered to women in labor has more effect upon the fœtus in utero than is generally supposed or admitted. "Dubois has made the statement that anæsthesia of the mother causes increased rapidity of the fœtal heart-beats." A distinct odor of chloroform has been detected in the breath of new-born children, and chloroform has been found in the placenta fifteen minutes after it had been inhaled by the woman. It has also been repeatedly found in the urine of the child, after it had been administered to the mother. "Dr.

Zweifel, arguing from these facts, concludes that the chloroform inhaled by the mother passes into the circulation of the fœtus."

It is a fact now generally admitted that asphyxia of new-born children is much more frequent after the inhalation of chloroform by the mother than without it. It has been stated that chloroform has never been known to kill a woman in child-bed. Since the use of it has become so common, and so indiscriminate in many localities, and since it does imperil life in so many ways, can this statement be true? I do not believe that it can; at the same time I cannot give any evidence to the contrary.

Unfortunately for medical science and truth, the statistics of recoveries are much more faithfully reported than the statistics of deaths; and I have no doubt that many a woman, and many a child, too, have been *eased* into an untimely grave by the indiscriminate use of a good but exceedingly uncertain and dangerous remedy—a remedy so uncertain and so dangerous that we cannot, in any case, foretell certainly what may be the result, even though it be administered by the most experienced and careful hands.

ART. IV.—*Anœsthetics in Midwifery.* By WM H. BRAMBLETT, M. D., Newbern, Va. (Read before the Wythe Co., [Va.] Medical Society, December 13, 1875, and referred for publication).

The year 1847 witnessed the introduction of chloroform as an anæsthetic agent in obstetric practice. To J. Y. Simpson the profession is indebted for the discovery that the action of the parturient uterus is not suspended during the anæsthetic condition. Of the utility and happy effects of anæsthesia in operative obstetrics, many were soon convinced, but the propriety of its use in ordinary cases of labor evoked hot discussions, and upon this question we are not agreed to-day. The objections of those who opposed it were founded on *a priori* reasons. Those who advocated its use did so from what they knew, from actual experience, of the effects of the agent. It was opposed on both moral and scientific grounds: That it was designed by the Creator that woman should suffer in her travail; that the physical pain of the parturient act was physiological, and an essential

element in the function; that anæsthesia arrested uterine action; that it would produce uterine inertia, and thus conduce to post partum hemorrhage; that it would produce puerperal mania and puerperal convulsions; that it would have a disastrous effect on the fœtus in utero; and that it was liable to cause death of the mother by virtue of its paralyzing action on the heart. All of these arraignments except one, namely: that anæsthesia will, in a few cases, arrest uterine action, stand to-day unproven, but the reverse—that no such effects follow its use. It is not my intention to enter into arguments to show the groundless nature of these charges, but will merely notice a few of them, principally the last.

That it is as much our duty to relieve pain, where it can be done without seriously endangering life, as to arrest inflammation, none will deny. To some who never took the drug, the administration of an ordinary dose of sulphate of morphia, either *per orem* or hypodermically, is attended with great danger. The administration of chloroform by one who understands it is not attended with danger! Yet the opponents to its use would not hesitate to use an ordinary dose of sulphate of morphia in case of one who never took it, knowing, at the same time, that it has, in just such cases, caused many deaths. If chloroform should not have a place in obstetric practice because of the danger of its use, then opium and its preparations should be discarded from general practice.

Chloroform has unquestionably been administered in a *greater* number of obstetrical than surgical cases; and yet, so far as my reading and personal knowledge extend, the first death has not yet occurred, and the reason is obvious. The conditions under which it is administered are entirely different. In surgery, the anæsthetic is administered to give relief from anticipated suffering; in obstetrics, to annul or destroy pain already existing. The tolerance of narcotics and anodynes bears a certain ratio to the intensity of the pain. This is recognized as a law in medicine, and for this reason the use of anæsthetics in obstetric practice must be attended with much less danger than in ordinary surgery. I never administer an anæsthetic in surgical or dental cases that I do not feel some fear as to the effects of the agent; but in obstetric practice it is different. I use the agent unhesi-

tatingly and freely without any serious apprehensions as to the result. I resort to its use in all cases of debility, exhaustion, or excessive irritability of the nervous system—the very cases, of all others, in which inertia of the uterus or hemorrhage are to be feared.

Believing that the inocuousness of chloroformic anæsthesia has been established, not, however, by anything that I have or might say, but by that infallible criterion, actual clinical experience, I will proceed to give some of the good effects resulting from its use.

It is important to know the effects of anæsthesia on the duration of labor. In a few cases, I am satisfied the period is lengthened. In quite a large per cent., chloroform performs the part of an oxytocic, and the period is actually shortened. A considerable number of cases are not materially influenced by the agent either one way or the other—neither lengthened nor shortened. Many cases progress the more rapidly the deeper the anæsthesia, and as a general rule this occurs in ind viduals of excessive nervous irritability, and when there is reflex spasm of the os uteri. It is especially indicated in all cases of extreme agitation and mental anxiety, which it allays, and thus conduces to a safe and rapid delivery.

It has been urged against the use of chloroform that it induces debility. This has not been the case in my practice. Its use in those who are exhausted and worn out with sickness and suffering through the whole period of their pregnancy, as well as in those of the most delicate physical organization, has been attended with the happiest results. In such cases, it often has the effect of an arterial stimulant; the pulse, from being rapid and feeble, under the influence of chloroform, becomes more full and equable, and the patient comes out from under its influence, at the end of the labor, in a better condition than that under which its inhalation was begun. The following case, occurring in my practice in 1869, will illustrate this point to some extent:

Mrs. S., primipara; one of the most feeble and delicate physical organizations I have ever seen; though a full-grown woman, she only weighed in health 87 pounds. All the *female wisdom* of the country had decreed that she could never be a mother. She was despondent and fearful of the result. The first stage progressed slowly, and, after three hours, I gave her a dose of

morphia sulphas, after which she slept some. Five hours after the commencement of labor the second stage began, and the pains soon became strong. Chloroform was given, under which the pains continued and were effective. This stage lasted one and a half hours, at the end of which a child weighing 7 pounds was born. The child cried lustily as soon as it came into the world, showing not the least bad effects from the chloroform the mother had taken. No injury was done to the soft parts of the mother, who was unconscious of the birth of her child. The after-birth came away without trouble. The patient did not lose two ounces of blood. She was delighted at her happy deliverance, and made a most rapid and excellent recovery.

As a means of overcoming a rigid os uteri, chloroformic anæsthesia ranks first, though in this condition I now always use chloral hydrate, given until it mitigates the pains or produces sleep in the intervals. These are the cases in which I formerly relied very much upon morphine, but I now prefer the chloral. In cases of rigidity of the perineum, attended with dryness and want of secretion, chloroform affords the best means of bringing about relaxation. When an excessive amount of adipose tissue enters into the formation of the perineum, chloroform does good, but in these cases lacerations will occur.

Parturients, in whom chloroform has been used, come out from under its influence joyous and happy, and advance more rapidly to a perfect convalescence than those with whom the agent has not been used. Instead of inducing debility, I claim that, by the use of anæsthetics, vital force is saved, which goes a great way toward establishing a perfect recovery.

Post partum hemorrhage and retained placenta are just as liable to occur after the non-use as after the administration of chloroform. In cases in which it was used, I have had retained placenta, but this has occurred as often, if not oftener, when it was not. I have never seen a case of serious post partum hemorrhage when chloroform was used, though the number of cases in which I have used it now amounts to several hundred, and the length of time I have been using the agent embraces a period of twelve years. Under its use I have effected deliveries in which the whole amount of blood lost did not exceed two ounces, and, indeed, one case in which I am confident, at the termination of the third stage, not one drachm of blood was on the clothes.

In many cases of puerperal convulsions, chloroform is the only efficient remedy to meet the terrible indications, and through its use, many now recover who would, before its introduction, have died. Only, since I have understood the application of chloroform to the treatment of this fearful malady, have I been able to save a single case.

The value of anæsthetic aid in operative midwifery is conceded generally by obstetricians, though some still oppose its use in some of the different instrumental or manual indications. I invariably resort to its use, with the happiest results, in all cases of version, all forceps and craniotomy cases, and in all cases when it is necessary to introduce the hand into the vagina or uterus to remove the remains of an aborted ovum. In all cases of this kind, perfect anæsthesia should be aimed at. It saves an immense amount of suffering, and the patient is greatly benefited in the end. The following case is introduced to show the happy effects attending the use of an anæsthetic in an operative case:

I had for three or four months been attending Mrs. M., a multipara, for frequent and copious hemorrhages, and in whose case I had made a probable diagnosis of placenta prævia, and had instructed her to send for me on the first indication of the approach of labor. I was summoned to attend her without a moment's delay in April, 1873. I lost no time in hurrying to her assistance; I found her lying down, the blood running off the bed down on the floor in a stream. As quickly as possible, I made a digital examination, and found the os uteri dilated to the size of half a dollar, through which I could feel one edge of the placenta. She had lost considerable blood, but was not alarmingly prostrated. I put her, as rapidly as possible, under the influence of chloroform, and entrusted the napkin and bottle to her husband; I stripped my arm and annointed my hand with oil and commenced slowly and carefully to pass it into the vagina and uterus, and in a few minutes carried my hand up to its fundus, ruptured the membranes, seized the feet, turned and delivered the child. The whole procedure, from the time I entered the room until the labor was completed, did not embrace a period of more than twenty minutes. In this short length of time, by the aid of anæsthesia, a human being was rescued from the brink of the grave; the child and secundines delivered; the hemorrhage staunched, and the patient in a condition fully as good as after an ordinary labor. She asked, as soon as the effects of

the chloroform had passed off sufficiently to do so, "How long will I have to suffer?" I replied, "You are not suffering now, are you?" "No," said she; "chloroform must be good for hemorrhage; I am not flooding a bit." "How do you feel?" I then asked. "I feel quite well, but dread the suffering that I know I have to undergo; I thought you were going to deliver me under the influence of chloroform." "Your suffering is over," I replied; "your baby is born." The wonder and amazement first depicted, and then the joy with which her countenance was lighted up, when she passed her hand down over her abdomen, can be imagined but not described. She made a rapid and perfect recovery. The child was still-born, and could not be resuscitated, from, I suppose, the unavoidable pressure on the umbilical cord.

If this operation had been attempted without the aid of an anæsthetic, the delivery would necessarily have been delayed; from resistance on the part of the patient and the rebellious nature of the unsubdued uterus, valuable time would have been lost, great suffering endured, and the patient probably have lost her life from hemorrhage.

I have used hydrate of chloral as an anæsthetic in a few cases, but did not like it. Administered to the extent necessary to relieve the pains of the second stage of labor, its effects are more profound after the labor is over, when they are not desired, than at the time when they are, namely: when the head is traversing the soft parts of the mother. Anæsthesia from chloroform passes off in a few minutes; that from hydrate of chloral requires hours. The effects of the first are easily managed; those of the latter, when once induced, are unmanageable.

But hydrate of chloral in parturition has its office, namely: as an assistant to chloroform, to relieve the pains of the first stage of labor, or to supplement its use in the second. I usually use the two agents as follows: If the first stage is attended with much pain, I give hydrate of chloral in fifteen-grain doses every twenty minutes until the patient sleeps between the pains. When the second stage begins, I commence with the inhalation of chloroform, only during the time of the pains, applying the napkin to the face as soon as I discover the pain coming on, which can always be anticipated a little by keeping the finger on the os uteri. When the pains are severe, the patient will always call

for it as soon as she has intimation that they are coming on. If the pains of the first stage are not much complained of, I do not give the chloral; but, if the inhalation of chloroform only during the time of the pains, in the second stage, does not give sufficient immunity from suffering, I then supplement it with one or two doses of hydrate of chloral, and continue the chloroform as before, carrying it far enough to produce complete, or nearly complete, unconsciousness at the time the head is passing the perineum.

As a summary of the conclusions at which I have arrived, based upon my experience with anæsthetic aids in the practice of the obstetric art, I submit, in conclusion, the following propositions for the consideration of the Society:

1st. Anæsthetics are of great value in the practice of obstetrics, and as an agent chloroform is to be preferred.

2d. Hydrate of chloral is valuable as an aid to chloroform in the second stage of labor, when the inhalation of the latter only during the existence of the pains, does not afford sufficient relief; and in the first stage, its administration, when the os uteri is rigid, and when the irregular and partial contractions of the uterus are attended with intense and almost constant pain, producing no effect toward advancing the labor, is attended with the happiest results.

3d. The administration of chloroform, as an anæsthetic, merely as a means of relieving pain, is justifiable in natural labor.

4th. Anæsthesia from chloroform exerts no injurious effects upon either mother or child.

5th. It is especially useful in calming the mental excitement and agitation attending labor in very nervous women, and in cases when the progress of the labor is retarded by pain resulting from a previously existing disease, or one induced by the labor in its progress.

6th. Hydrate of chloral, as well as chloroform, are both of great service in spasmodic contraction and rigidity of the cervix uteri, and the latter in tetanic rigidity of the perineum, in the obstetric operations, and in puerperal convulsions.

Clinical Reports.

Clinical Cases in Electro-Therapeutics. By Z. COLLINS McELROY, M. D., Corresponding Secretary Academy of Medicine, Physician to the Home of the Friendless, Zanesville, Ohio. (Reported to the Academy of Medicine 9th December, 1875.)

Aphonia.—Malinda Ethel, æt. 37, single, has had poor health most of her life. Her mother died at the age of 52 of jaundice; father still living; has had two brothers and three sisters; brothers alive; one sister died in childhood of flux; another of consumption in her 18th year; the other sister living and well.

In her 25th year, Miss Ethel lost her voice for about one year, health very poor at that time. With improved health her voice returned; but for the next succeeding five years she frequently lost it, sometimes for only a few hours, but often for days, and several times for a month or more at a time. In her 31st year, these occasional losses of voice ceased, and for the next 5 years she retained the power of audible speech.

In February, 1874, she lost it again—her health being very poor. In August, 1874, she came to this city from Morgan county, where she was born and has resided all her life, and became a client of Dr. Erwin, who gave attention to her general health, with such success that in May following she regained her voice once more, after whispering for fifteen months, and immediately returned home. But at the end of a week it was lost again, and she soon returned to this city and placed herself again under the professional care of Dr. Erwin, and has thus passed the summer and fall improving in general health, but did not recover the power of audible speech.

Dr. Erwin brought her to my office for the first time for electrical treatment November 16th last. Her feet were placed in a warm bath connected with the last carbon plate of a ten-cup battery (cups ℥vi, plates $5\times1\frac{3}{4}$ inches). The zinc plate of the first pair was connected by the ordinary insulated flexible cord, with a thin slip of brass, $1\frac{1}{2}\times3$ inches, oval, wrapped in a small flannel napkin, wet with hot water, and applied to the top of her head, wetting the hair where it was thinnest, nape of neck, front of neck and chest, dwelling particularly over larynx and trachea.

Through each hand and arm separately, the current was passed through a short coil, and slowly interrupted during the application, not exceeding one minute each, 14 minutes in all. The quality of the current was, therefore, galvano-magnetic, galvanism largely in excess.

She had similar applications not exceeding 10 to 14 minutes each, on November 18, 20, 23, 26 and 30, and on December 3. Two batteries were used—the one herein described, the other a four-cup Calland. All the applications were through a short coil. The Calland was used twice, the ten-cup five times. The current was used as strong as she could bear it without being unpleasant. She complained more of the burning sensation under the flannel than she did of the muscular jar when the current was interrupted. I allowed the skin to get very red over the trachea and larynx, but not to blister.

Dec. 4, about ten hours after the last application, on waking, she found she had regained her long lost voice. Soon after breakfast she hastened to Dr. Erwin's office to tell him how happy she was in the possession of her voice again. The Doctor was at breakfast, so she had to wait a little while in his parlor. On his entering the room, she said, "Good morning, Doctor, I have come to see about my returning home to-day." The Doctor replied she had better wait a little longer—that he did not like her to return in the same situation as when she came. He felt confident she would regain her voice soon. "But, Doctor, haven't I got it now?" The Doctor confessed the joke.

I do not know what Dr. Erwin gave her, but I noticed a decided change in her complexion after the second application of galvanism, for that was what she had in large excess, though the combined Galvano-Faradic current was used on each occasion. Dr. Erwin brought her in his carriage the first four times; she walked over the other three (about one mile). She told me she slept better after each galvanic application, but had had all the summer and fall a good deal of præcordial distress, and the current detected tender spots on the left chest, more noticeable over and beneath the clavicle.

Dec. 7, Miss Ethel presented herself, and in as good a voice as my own said, "How do you do to-day, Doctor?" After receiving another application, lasting ten minutes, during which

she talked as well as anybody, she expressed herself as feeling well, and was highly elated with her new ability to talk audibly. She returns to her home at the close of the present week. There is this time no wavering of her voice, and no fatigue in talking, as after her recovery on former occasions. Then she is in better health; and if she can pull through the change of life, which, for her, must be close at hand, she may live to a good old age, with the ability to speak audibly unimpaired.

I think it very probable the galvanic action hastened, at least, the recovery of her speech, and I think it will have permanence for many reasons. She, herself, gives galvanism credit for immediate results; but to Dr. Erwin for those more remote which prepared the way for the galvanic action to do its work.

She spoke of having used croton oil very freely about the larynx prior to the recovery of her voice in May last, but her ability to speak audibly lasted, unhappily, only a week. Then followed seven long months of whispering again, to recover it after galvanism had wasted at least some portion of her laryngeal structure which had failed to perform natural functions.

Singultus.—Mr. W., æt. 35, miller, very stout, had hiccough all day yesterday (Oct. 19th, 1875), except a few intervals, but slept more or less during the night. Soon after rising Oct. 20, it commenced again, and, with but occasional intervals, persisted all day, though he has attended to his duties, and eaten his meals. Was taking medicine for another purpose, which he thought brought it on yesterday; he omitted taking it to-day, but still his hiccough continued. It was distressing to see and hear him while in my office. I asked him to pull off his shoes and put his feet on a wet cloth resting on a copper disc, connected with the last carbon plate of a ten-cup battery, the same as used in the previous case. The zinc pole, arranged as in that case, was placed on the nape of his neck. The moment the circuit was closed, the hiccough ceased. I kept it there about three minutes; then applied it over the upper part of the sternum, sliding the pole right and left over the upper portion of lungs, for three minutes more. The carbon pole was now placed over the upper part of abdomen, and zinc over nape of neck, for three minutes more, interrupting the current slowly all the time. He

was directed to resume his medicine, and to return to my office if hiccough came on again.

Oct. 21, 7 P. M.—States that about one hour after leaving office last evening, hiccough came on again; continued about 15 minutes; ceased, and has had no return since, though he continued the medicine, which he thought at first brought it on. The current was through a short coil, and was plus galvanic, and was not strong enough to produce unpleasant muscular jars when interrupted.

Correspondence.

Can Man, or any other Animal, Exist without a Liver?

Mr. Editor,—The question, as above propounded, has been suggested to my mind by a circumstance in the case of a hog that came within my own immediate observation. Several years ago, I had a "pen" of very fine, fat hogs. I was at that time paying some attention to farming. Among the hogs I noticed a very large sow, which did not fatten or thrive quite as kindly as some others, though in every other respect I saw no difference. She ate as heartily as the others, and seemed to evince every indication of good health. Indeed, she was, as I thought, ordinarily good pork. But one morning the servant who attended to the feeding of my hogs reported the "big sow" as being dead in the pen.

Thinking that possibly she died from some organic disease which might interest me as a medical man, I had her "opened," and I carefully examined the condition of every organ. I found everything apparently as healthy and as normal as I ever saw, *except the liver*, which was almost entirely absent. The whole parenchyma of the gland was gone—nothing remaining but a fibrous net-work, similar to that of a piece of seine. There was no discoloration of the skin incident to the absorption of bile; neither had there been any constipation at all attributable to a want of biliary secretion. The crude ingesta appeared to have been undergoing in the alimentary canal all that natural metamorphosis necessary for assimilation. There was nothing in the

brain to give evidence of congestion or other abnormal condition whatever; the kidneys were both intact, and from the quantity of urine found in the bladder, it looked as if they had performed their part with perfect fidelity. But when I came to examine the urine proper, I found, by the application of heat, and the subsequent coagulum, that it was highly albuminous.

Now the question, as a physiological and a pathological one, is, what was the immediate cause of the sudden death of this animal? Of course, the true and unmistakable remote cause was that the system was deprived of the necessary functions of the liver. But why, with seeming tolerably good health, was it cut off so abruptly? From the complete and thorough disintegration of the organ, it was evident that the animal had lived for some considerable time without it, and had doubtless learned to adapt itself to the condition; hence, with all the signs of general good health, with exception that it did not fatten as kindly as some others of the flock, I see no reason why it should have died so suddenly, after sustaining itself under the condition that had existed for so long a time.

I have no doubt that people are frequently similarly affected; and for want of information, because of lack of autopsy, we are often in the dark for a true theory regarding the nature of the cases which have been lost.

But I fear that I will reap the jeer and ridicule of my profession by submitting the facts of a pathological question as having existed in the vulgar economy of a hog; and while I know we can't make a "silk purse out of a sow's ear," yet, paying attention to phenomena of disease, no matter where found, we may be able to draw conclusions beneficial to an animal of more dignified pretensions. And while I am not a *real* Darwinian, I recognize a homology in the animal kingdom, so far as tissue and physical adjustment are concerned. Hence, I hope diseased action, as detailed in the case above, will be read by some with interest.

E. C. BARRETT, M. D.

Jerusalem, Va., 1876.

Original Translations.

From the German and French. By Wm. C. Dabney, M. D., Charlottesville, Va.

Syphilitic Affections of the Lymph Glands.—By Dr. L. v. Vajda. (*Allg. Wiener Med. Zeitung*, Nov. 30th, 1875). On the 19th of November, 1875, Dr. Vajda read a paper on the above subject before the "K. K. Gesellschaft der Anzte." In conclusion, he made the following statement of the results of his investigations: "The capsule of the glands affected with syphilis do not take an active part in the process. The swelling of the glands is caused by an accumulation of cells, which are, for the most part, imported. The appearance of cell proliferation in the glands has no connection whatever with the increased mass of cells. The glands lying highest in the chain of glands in the groin and pelvis will be found least swollen and affected. Hermann has found precisely similar conditions in lepra.

"The process in the lymph glands is not so characteristic that one would be able, by any one peculiar symptom, at any stage of the affection, to recognize the process as such. It can only be easily recognized when all the symptoms are taken together.

"With reference to the question of the syphilitic virus, he found himself obliged to sustain the views of other authors (v. Sigmund, &c.) who regard the lymph cells as the couriers of the syphilitic virus, since the contents of the glands, at the time of resorption, are always cellular, which appearances are common to all eruptions."

Dr. Rabel remarked that the caseation and subsequent necrobiosis of the lymph glands was not due to any lessening of the blood pressure, but that these conditions were dependent on the ill health of the cells themselves. The protoplasm of the cells of such lymph glands possesses a very short time of life, and in the natural course of things they will come to an early death.

Alterations of Sensibility in Articular Rheumatism, and the Electric Treatment of this Affection.—By Dr. v. Drosdoff. (*Centralblatt für Medicinische Wissenschaften*, Nov. 17, 1875). Dr. Drosdoff noticed in a patient suffering from acute

articular rheumatism that, according to his statement, there was very decided lessening of the sensibility to the electric current, whilst the pain, on movement and pressure, was still very considerable. He thinks it follows from this, that the opinion generally received by physiologists, "that for all physiological sensations a special apparatus exists," is untrue. After describing the manner in which he tested the sensibility, &c. (which is of no practical interest), he proceeds: There was observed in the affected joints a considerable diminution in the sensibility to pain in consequence of electric irritation, and even its complete disappearance, although the slightest pressure had been followed by very intense pain. This diminution of sensibility is, according to Drosdoff, confined within narrow limits, only the local affection being influenced. This lessening of sensibility, on the removal of the electrodes from a diseased to a healthy spot, passes suddenly to the normal sensibility. The diminution of the electro-cutaneous sensibility appears, as a general thing, to come on some time before the pain in the joints, and it lasts longer than the rheumatic pain proper. So long as the electro-cutaneous sensibility has not returned to the normal standard, the disease cannot be considered as cured, since, as a rule, relapses occur.

Along with the diminution of the electro-cutaneous sensibility, there also occurs a decrease in the sensibility to pressure. The sense of temperature is somewhat blunted. The tactile sensibility of the joint is decidedly increased, and frequently changed in an anomalous manner. The increased tactile and thermic sensibilities diminish after the faradization has been continued for five or ten minutes. The temperature of the skin of the affected joint is always about two or three degrees higher than that immediately surrounding it. The rise of temperature generally precedes the rheumatic pain, and lasts longer than it. After the faradization has been practised five or ten minutes, there occurs a fall of the elevated temperature to or below the normal. The subjective pain is decidedly lessened after this, so that passive and active movements are very bearable. The above described results of faradization last from three to five hours. At the same time, the duration of the attacks of pain will be shortened, and their intensity greatly diminished. Far-

adization does not prevent relapses, but the time of sickness is considerably shortened, and the severity of the attack lessened.

Treatment of Carbuncular Disease in Man by the Subcutaneous Injection of Anti-Virulent Fluids.—By Dr. L. A. Raimbert. (*Gaz. Hebdom.* No. 25 et 26, 1875.—*Rundschau*, Dec., 1875). Raimbert tried the subcutaneous injection of carbolic acid (1 part to 50) in two cases of carbuncle, after other means had failed, and in one case the hypodermic injection of iodine (1 part to 500), in all three cases with favorable results. In the first case, he was consulted on account of a malignant œdema of the face by a farmer who, a week before, had lost a good many sheep with a fatal inflammation of the spleen (milzbrand). The disease first appeared as a number of small pustules behind the right ear, to which was soon added a considerable infiltration of the cheeks, lips and structures beneath the jaw. On the third day, the white-hot iron was applied around the diseased part, a distance from it of from four to six centimetres, and the surface of the scabs was sprinkled with corrosive sublimate. On the following day, so soon as the swelling had diminished, Raimbert injected ten or twelve Praaz's syringefuls of a two per cent. solution of carbolic acid into the whole extent of the cheek, from the temple to the submaxillary space. The result was astonishing; the injections were repeated on the following day; the scab came off on the 18th day, and the healing progressed uninterruptedly.

The second very interesting case was in the person of a farmer who, in opening a vein in a cow suffering from gangrenous inflammation of the spleen, had, in doing so, inflicted a slight abrasion of the skin on the left ring finger. Three days afterwards, he noticed at the point of abrasion a small papilla depressed in the centre, which, the physician he consulted declared, was malignant pustule, and cauterized it with caustic potash. On the following day, there was considerable increase in extent and severity, and the swelling had been decidedly augmented by the use of the caustic. The swelling rapidly extended to the whole arm, which became so hard and tense that it was necessary to make a number of incisions in both the arm and forearm to lessen the tension. On the fourth day Raimbert saw the patient, and, mindful of the re-

sult in his former case, he injected nearly forty syringefuls of carbolic acid solution, of the same strength as formerly, in the whole length of his arm. The result was "*brilliant.*" As early as the next day the arm was less hard; and the injections were repeated on this day morning and evening. From that time, the improvement progressed slowly but steadily; so that, at the end of two months after the gangrenous parts of the ring finger, a part of the back of the hand, and also some parts which had become gangrenous at the seat of puncture, had been cast off, all the wounds were found to be well healed over.

In a third case, where the wife of a tradesman had been handling hides, the affection began as a small knot on the right cheek, the connective tissue around which had become infiltrated for a considerable distance, and from which a red band of lymph vessels ran directly to an enlarged gland behind the jaw. After removing the skin at the centre, the wound thus made was treated with corrosive sublimate. The swelling had greatly increased on the following day, and was progressing towards the neck and eyelids; that evening 4½ syringefuls of a solution of iodine (1 part to 500) were injected under the skin of the cheek and lower jaw. On the following day, no change having occurred in the swelling, the injection was repeated, and on the next day there was a manifest diminution in the size of the affected part. On repeating the injection, the improvement was marked, and steadily increased, although on the seventh day of the disease the patient gave birth to a seven months' child. The patient lost then and on the following day a considerable amount of blood, and the hemorrhages only ceased on the third day after her delivery.

Epithelioma of the Tongue, and its Relation to Psoriasis of this Organ.—(Communication of M. Trélat to the Surgical Society. *La Tribune Medicale*, December 19, 1875). At the session of the 8th of December, the Surgical Society listened to a very interesting communication on the connection which appears to exist between psoriasis of the tongue and lingual epithelioma. The cases presented by M. Trélat are only three in number. The first was a very characteristic case of epithelioma of the tongue—the appearance of which was preceded locally by a slight attack of psoriasis, so slight, indeed, that it had been scarcely noticed

by the patient, and as little observed by the physician. The cancerous affection could not be arrested by surgical means, and the patient rapidly succumbed to the well known complications of cancer of the tongue.

The second case occurred in the person of a man in the prime of life, vigorous, enjoying habitually good health, and a great smoker. On the upper surface of the tongue a cancer developed itself with most marked characteristics at the precise point where for some time there had existed a patch of psoriasis, well known under the name of the "smoker's patch." A radical operation was performed by means of the galvanic cautery, and the examination of the tumor removed fully justified both the diagnosis made and the operation performed. It was composed of "papillary" epithelium, and of epidermic globes, which are altogether peculiar to this form of tumor.

The third case is an example of lingual psoriasis, old and rebellious, out of which there developed an enlargement of the two halves, right and left, of the upper surface of the tongue, on each side of the median line. There existed a sort of tumor with two lobes, separated by a very deep furrow, which corresponded with the median septum. This enlargement did not present the appearances of a new formation of the nature of epithelium; the appearances which characterized these growths were wanting; but Trélat, enlightened by the two striking previous examples, came to the conclusion that he was in the presence of a tumor of malignant nature. A partial ablation of the tongue was proposed, accepted by the patient, and performed by means of the galvanic cautery. All the projecting part of the tongue was removed in the form of a large slice. The result of the operation was very favorable, and the patient was actually able to use his tongue as if it was still entire. The examination of the tumor after its removal was confided to M. Cornil, who was unable to form a positive opinion as to its nature. The diseased structure was formed by the mucous membrane of the tongue, which was very much enlarged, and traversed by tubes having no regular arrangement, but filled with young epithelial cells. There were no epidermic globes—no papillary hypertrophy and hyperplasia; in a word, nothing characteristic of completely developed epithelioma. The disease had not reached a sufficiently

advanced stage for it to be decided by the microscope certainly and without hesitation what was its nature, and to say beyond a reasonable doubt what the result of the operation would be. In the present case, the diagnosis as to its nature ought to rest on the subsequent history of the disease. If it should return, it would be certain that the affection was epithelioma. Unless it did return, the problem would remain unsolved.

From these three cases, shall we draw the conclusion that the lingual psoriasis *simply preceded* the epithelioma, or shall we rather say that the psoriasis *caused* the epithelioma and was transformed into it? It is not certain, for it would be dangerous to try to establish a theory on such limited material; but it is certainly highly probable that the psoriasis was the *irritative process*, as a consequence of which the epithelioma was developed.

Local Application of Chloral Hydrate in Pruritus Vulvæ—Vicarious Menstruation by Sanguinolent Salivation.—In *La Tribune Medicale* for December 19, 1875, a very interesting case of pruritus of the vulva is reported, which was treated by the local application of chloral hydrate. The patient, a young lady, whose age is not stated, had suffered for years from violent attacks of hysteria. Her menstrual flow had ceased, but each time when it should have appeared, she suffered from a sanguinolent salivation. On inquiry, Dr. Gellé, who reports the case, learned that she had suffered for some time from pruritus of the vulva, which was so severe as to necessitate her rising several times during the night to bathe in cool water. Dr. G., believing that the suppression of the menses (in the normal manner, at least) was due to the cold bathing, to which the young lady was obliged to resort, addressed his treatment directly to the pruritus of the vulva. He had recourse to chloral; a solution of ten grammes of chloral hydrate in one thousand grammes of water being employed as a wash several times a day. Besides this, a tampon of wadding soaked in the mixture was placed between the labia. Under the influence of this treatment, so simple and so strictly local, the itching immediately became less, and gradually became so slight as to permit sound and continued rest. In the course of five days, the pruritus had entirely disappeared.

Dr. Gellé states that Dr. Laborde had previously obtained excellent results from the employment of this remedy in similar cases, and he recommends its use to the profession.

Sudden Death after Thoracentesis, and Epileptiform Convulsions as a Consequence of Pleural Injections.—Dr. Maurice Roynand, Physician to the Lariboisien Hospital, &c., reports these interesting cases in *La Tribune Medicale*, December 5th, 1875. They are too long to admit of being reproduced here in full, but I propose to give an abstract of each of them:

The patient in whom the epileptiform convulsions occurred as a consequence of pleural injections was under Dr. R's care at the Lariboisien Hospital in 1867. He was a robust man, a carter by occupation. When he entered the Hospital July 12, he was suffering with an intense pleuro-pneumonia of the right side. He subsequently had endocarditis, which lasted some days, and on August 12, he had some varioloid pustules, and there was evident suppuration in the pleural cavity. On the 16th, suppuration continuing, thoracentesis was practised, and about three quarters of a litre (a little more than a pint) of creamy pus was withdrawn. On September 2d following, the "effusion" having re-appeared, a drain was applied after the method of Chassaignac. It withdrew a considerable quantity of pus by the two orifices. No improvement followed. On October 24, the anterior half of the drainage tube was removed, the other half being left to act as a canula. On the 26th, an effort was made with great care, to remove the remaining portion, but on withdrawing the canula a little way a small quantity of very thick pus escaped. Dr. R. then decided to wash out the pleura before removing this piece of tube. While the liquid was entering, the patient complained of some difficulty of breathing, but no attention was paid to it—the operation having been frequently performed without the slightest trouble. During the last injection he used a little force, and the patient suddenly became very pale, and fell back. The pupils were greatly dilated, the face deadly pale, there was no pulse (perceptible), and the breathing was completely suspended. After a moment, during which the patient seemed to be dead, convulsive movements of the upper and lower extremities occurred, trismus and slight opisthotonos. At the same time, the face became livid, was

greatly injected, all the veins were turgid. This lasted for about a quarter of an hour, and was followed by a comatose state, which lasted about three-quarters of an hour. When he aroused, there was found to be paralysis of the right upper extremity. This subsided, however, in a few days, and on Nov. 22d the wound had cicatrized, and the patient was discharged from the Hospital in quite a satisfactory condition; though the effusion subsequently returned.

Dr. R's second case, in which death occurred after thoracentesis, was in 1873. A healthy young man was under his care for pleurisy. Pus formed and accumulated in the pleura, and was first withdrawn by the aspirator; subsequently, however, thoracentesis was practised. The pleura was then washed out several times without any ill effects; but on February 21, after an injection into the pleura, the patient fainted, and, on recovering his consciousness, he stated that he could not see. On ophthalmoscopic examination, the right eye presented around the papilla a considerable circle of serous effusion, and the veins were engorged at certain points; in the left eye there were similar signs of an ischæmic papilla. On the evening of the day on which this occurred, Dr. R. very cautiously endeavored to repeat the injection. The fainting which took place in the morning again occurred, and in spite of all treatment, the patient gradually became comatose, and had occasional epileptiform attacks, during one of which he died at 6 o'clock the next morning. The signs of old pleuritic inflammation were presented on *post mortem* examination, and there was some slight pericarditis; but so far as Dr. R. could judge from a very careful examination, the brain was normal in every respect.

The Disturbances of the Digestive Process in the Course of Diarrhœa and Dysentery. A Physiologico-Pathological Study. By Dr. Jul. Uffelmann. (*Deutsch Archiv f. Klin. Med.*, 14 Heft 3). This paper is based on the observations made on 240 patients suffering from diarrhœa and dysentery during an epidemic of these affections. One hundred and two cases served for the investigation of the fluids of the mouth, especially in connection with the process of the conversion of starch into sugar; in 41 cases, the contents of the stomach which were

vomited were submitted to investigation, and once the secretion of bile was studied by means of a biliary fistula.

The process of saccharification, as determined by the introduction of little pieces of paste into the mouth, remained normal in *a*febrile cases of diarrhœa and dysentery, or in those in which the fever was slight. In severe cases, when the fever was high, the saliva was very much changed, becoming thick, slimy, sour, cloudy and poor in salivary corpuscles, but rich in fungi epithelial cells and albuminous and fatty molecules. The power of converting starch into sugar was lost. In cases of moderate intensity, all of these changes are present in a lower grade. The saccharifying power was, with very few exceptions, increased in proportion to the diminished amount of saliva. The alkalinity, quantity and specific action of the saliva depended on the stage and intensity of the disease. On the digestion of starchy food in the stomach and intestines, Uffelmann could make no very accurate investigations. The frequent occurrence of vomiting, especially in children during the course of diarrhœa and dysentery, gave a fair opportunity for the investigation of stomach digestion. Nurslings furnish very satisfactory material for these investigations on account of the simplicity of their food and the frequency with which the contents of the stomach are vomited in health.

It was found that the contents of the stomach in nurslings suffering from attacks of diarrhœa and dysentery, accompanied by much fever, showed that there was a very decided formation of peptones (casein peptones), and hence that the function of the gastric juice was not lost. The acidity of the gastric juice was abnormally great, and hence the milk was coagulated in large amounts. In the further course of the disease, the reaction was not infrequently alkaline, and the formation of peptones was diminished, and then the coagulation of the milk only occurred in consequence of fermentation.

The condition of acidity or alkalinity of the gastric contents gives rise to very important prognostic indications. Similar changes occur in children suffering from diarrhœa and dysentery, fed artificially with the milk of animals; they are more apt to vomit, however, when fed with this than when fed with mucilaginous soups. In older children and adults, the digestion in mild

cases is very slightly effected; but in those accompanied by considerable fever, the appetite is lost, the vomited matters are at first sour, but some time after taking food they are alkaline or neutral. The acid matters vomited contain peptones. In cases of very high grade, no juice capable of digestion appears to be secreted. The formation of peptones does not occur in the vomited matters which give an alkaline reaction. They appear again at the beginning of improvement.

[The changes which occur in the bile are of no special interest to practitioners].

Uffelmann draws the following conclusions as a result of his investigations:

In nurslings, the disturbances of digestion occurring in the course of attacks of diarrhœa and dysentery, accompanied by fever, are, in the main, identical with the disturbances which occur in other febrile affections. In adults, the affections of digestion in febrile diarrhœa and dysentery are more marked than they are in other febrile affections. Food which is difficult of digestion is not digested in any febrile affection, and therefore increases the fever, although the old axiom that "by taking food one feeds the fever" is not strictly true. It is, therefore, a very important matter that patients suffering from fever should take such food as is known to be nourishing and easily digested, such as solutions of grape sugar, salts of the vegetable acids (in the absence of diarrhœa), alcohol, mucilaginous drinks, soups containing gelatine (in order to repair the waste of the nitrogenous constituents of the body—Voit); only occasionally should milk be used in adults. It seems to us (says Dr. Eisenshitz) unadvisable to deprive children suffering from diarrhœa of breast milk, when there is continual vomiting, and symptoms of anæmia of the brain supervene, and to substitute therefor Liebig's extract of meat without cow's milk. Uffelmann recommends for adults in mild cases fresh, "leavened" bread, "brown" bread, fresh vegetables, fruit and well-seasoned food. He does not use, in severe cases, the "peptonized albuminoids, which have been so highly recommended (Lule); he considers them, to say the least, of doubtful efficacy, since it is very unlikely that they can be assimilated. Milk should only be allowed in very mild cases.

From the French. By WILLIAM S. STOAKLEY, M. D., Bay View, Va.

A Case of Blue Urine—Considerations of the Probable Nature of the Blue Matter Contained in Certain Urines.—*Le Progres Medical*, Nov. 25, 1875, contains the following from Prof. A. Robin: This urine was passed by a patient, the client of Dr. Maillard (de Dijou); an hysteric, aged 35 years, of remarkable obesity, who has been the subject of divers attacks, paralytic, amaurotic, and is very nervous. For a month she complained of a sharp pain in the intercostals of the right side, which radiated to the lumbar region. When this pain ceased, the patient passed a small quantity of blue urine. After this period she had a second painful attack, seemingly like the first, which she so judged by the emission of blue urine.

Character of the Blue Urine.—It is passed in small quantity; its emission is painful. It is not completely blue immediately, but it is preceded by urine, in the sediment of which is perceived a great quantity of blue matter, and in the emission which follows, the urine contains a notable proportion of this matter.

Density of the first urine, 1,015.5; of the blue, 1,025; of the consecutive, 1,018. It is very muddy; its odor is not urinous, but approaches to that which is exhaled from certain dye establishments (indigo, madder). Its reaction is very acid; its color is deep blue indigo, with violet reflection; by reflection it is violet, but by transparence it is absolutely blue. It leaves a considerable deposit of copperish blue. Under the microscope are found lumps or masses of a very pure blue, without traces of crystallization. The cellules of the vesicle and the wall, the nucleus and the granulations, are colored pale blue, and there are a great number of algæ and sporules. Heated, the urine reflects blue, turning to reddish violet. Filtered, it is pale blue, but exposure to the air, and fermentation, give it a vinous tinge, turning to violet. The urea and uric acid are very much diminished. The proportion of phosphates appear little influenced; after fermentation the deposits of filtered urine contain much phosphate of lime and ammoniated magnesia. Proportion of silica, appreciable.

The Blue Matter is slightly soluble in water, and hardly solu-

ble in hot alcohol; it is insoluble in chloroform, turpentine, benzine, and in the alkalies. It is soluble in sulphuric acid, and assumes a rose color, which, in a few minutes, turns to orange; soluble in chlorohydric acid, and takes a magnificent carmine color (reaction characteristic); slightly soluble in acetic acid, which does not modify its color. Blue precipitates are formed by the alkalies of the acid solutions. Chloride of zinc gives it a mallow-color. It is decolored by azotic acid, and those acids which contain chlorine. Heated, it disengages carbonate of ammonia and a brownish empyreumatic oil—the reddish color disappearing without residue.

What is the nature of this blue matter? Is it simulated? No.

Clinical Proof.—Dr. Maillard has studied this case with great diligence, and had the urine passed before him, and affirms that the character of the patient excludes all idea of simulation.

Chemical Proof.—The blue matter passed does not resemble a single one of the blue matters known, such as indigo, litmus, Prussian blue, *blue d'outremer*, *violet d'oseille*, *blue de Campêche*, hematine, analin blue and violets (azuline, Hoffman's violet, blue de Lyon, etc).

Does it resemble any blue matter contained in the urine?—Hippocrates, Galen, Actuarius, Bellini, Davach de la Revière, Garnier, Bracounet, Julia and Cantin have each seen blue urine. The authors who have studied the blue matters in the urine have given to it different names: urocyanose, uroglaucine, indican, indigose, cyanourine, etc.; others have admitted that the principal colorings were those of the biliary matters, Prussian blue, etc. It is not admitted at the present time that a sole matter indigogène, indican, by decomposition, will give uroglaucine or indigo blue. One can see by examination of the above named reactions that our blue matter does not anything like resemble uroglaucine. But it offers with the *cyanourine* of Bracounet many analogies. This cyanourine, denied by most authors, exists then; it is not, as they pretend, a principle of bile coloring; it does not resemble anything like the uroglaucine to which the urologists have wished to simulate it; it is composed of something of the nature of which we are not yet determined; but we have commenced in the laboratory of M.

Thènard, researches which will finally elucidate this obscure point. We can only at this moment establish the sole fact that blue matter described by Bracounet under the name of cyanourine exists truly.

What is the origin of this matter?—Bracounet not having found uric acid in the urine which he has examined, believed that the blue matter was a product of the transformation of this acid. Our urine contains uric acid, but in small quantity, it is true. *À priori*, we put forth the following hypothesis, which we will essay to clear up:

1st. Among the derivations by oxidation of uric acid, we should find bodies colored blue, such as violantine, etc.; the cyanourine should not bear any resemblance to one of these bodies, and not be derived from them, by oxidation of the uric acid. This should be, then, an intermediate between the uric acid and the urea, intermediate, more oxidized than the uric acid, less oxidized than the urea.

2d. Nencki has seen, amongst the products of the action of pancreatic sugar upon the albuminoid matters, a principle by the name of *indol*, from which urinary indigogène should be derived. The cyanourine should have an origin of the same order, and its presence in the urine should cause us to suspect a pancreatic affection. In our forthcoming work, we will give the hypothesis to which we shall endeavor to rally after the results of our researches; other than these two hypothesis, we leave to themselves until after our experiments.

Case of Strangulated Inguinal Hernia in an Infant Aged 20 Days was presented last month at the surgical clinic of Hotel Dieu. M. Dupuytren, after having diagnosed the affection, did the operation, but the infant died of the inflammatory accidents following suppuration, which supervened in the portion of the mesentery which occupied the right iliac fossa. Whilst these cases of inguinal hernia are frequent enough in new borns, there is not known a single example of strangulation at this age.—*Nouvelle Bibliothèque Medic.*, 1828, T. 11, p. 141, *Le Progrès Mèdical*, Nov. 25, 1875.

Proceedings of Societies.

THE NEW YORK NEUROLOGICAL SOCIETY,

(Reported by Geo. W. Wells, M. D., Secretary.)

A regular meeting of this Society was held in the hall of the Academy of Medicine, 12, W. 31st street, on the evening of February 7th, 1876, the President, Prof. W. A. Hammond, in the Chair.

Hysteria.—Dr. John C. Peters read a paper entitled "*Notes on the Clinical History of Hysteria*," based upon cases of severe spinal irritation, and the so-called "bed cases," in that the patients take to bed, and cannot be got out of it; also, on cases of hysterical paralysis, and hysterical affections of the joints, especially of the knee-joints.

He alluded to the fact that the term hysteria is derived from the word *hystera* (the womb), in accordance with the ancient belief that the disease originated in an angry and disappointed womb, which, not being allowed to rise in the normal way, tore away from its attachments, like a balloon driven by a high breeze, mounted up through the stomach and bowels, tearing and rolling its way along until it was stopped in the narrowest part of the œsophagus, where it was compressed between the larynx and spine, causing *globus hystericus*, choking, strangling, and often convulsions. This array of symptoms was called "*the rising of the mother* or *womb*, or *strangulation of the womb*, or *fits of the mother.*" This was so common a belief that Shakspeare (quoted by Aitkin) makes King Lear exclaim when Gloster relates the cause of his being put in the stocks:

> "Oh! how this mother swells up toward my heart;
> *Hysterica passio!* down, thou climbing sorrow,
> Thy element's below."

The uterine origin of hysteria was believed in by Hippocrates, who is made to say that the womb is the seat of 600 real evils, besides innumerable minor calamities; and by Galen, Aretæus, Aetius, Paul of Egineta, Ambrose Paré, Zacutus Lusitanus, Versalius, Morgagni, Sauvage, Cullen, Pinel, Lisfranc, Dubois, Landouzy, Piorry, and many thousands of minor medical lights.

Another early theory was that malignant gases were generated in the womb by the decomposition of blood, mucus, and even semen in sterile women, just as the urine may become ammoniacal and offensive.

Sydenham was the first to locate the disease in the brain and nervous system, and to place great stress upon the antecedents of debility, depressing passions and emotions, sorrow, grief and

disappointment in unsettling the balance of the reason and the vital spirits or forces. He gives the case of a very ingenious and intelligent gentleman, who had just recovered from a long attack of fever, in which he had been bled three times copiously and purged repeatedly and severely, while he had been kept on very low diet during his convalescence. He was able to talk sensibly for a short time, when his under lip would be thrust outward and in frequent motion, as often happens in fretful children, who pout before they cry; but soon he was seized with the most violent fits of sobbing and crying that Sydenham had ever witnessed, attended with convulsive sobs and sighs, and violent beating of his breast. He ordered roast meats and wine, and we are told that "by continuing thus to eat and drink, his disorder soon left him."

Sydenham, of course, as such an astute observer and elegant writer would be sure to do, gives us an excellent description of the mental characteristics of hysterical subjects. He says: "Then, unhappiness does not only proceed from a great debility and indisposition of the body, for the *mind* is still more disordered, it being the nature of this disease to be attended with a cunning and subtle kind of almost invincible perversity and despair, so that they cannot bear with patience to be told that there are hopes or means of their recovery; easily imagining and preferring to believe that they are subject to all the mysterious and wonderful miseries that can befall mankind, and presaging the worst and strangest evils to themselves. Upon the least occasion, also, they indulge in wretched fits of terror, anger, jealousy, distrust, and other hateful and disagreeable passions. They seem to abhor hope, and joy, and cheerfulness, which, if they accidentally indulge in for a short time, they not only quickly chase away, but these pleasing but fleeting emotions of happiness seem to disturb their minds as much as the more depressing passions do. So that these inconsiderate creatures preserve no agreeable mean in anything, but are constant only to inconstancy. They love the same persons extravagantly at one time, and soon after hate them without cause. This instant they propose doing one thing, and the next change their mind and enter upon something contrary, but without finishing this last, they dismiss it for something else. So unsettled are their minds that they are never at peace with themselves, even in their sleep. Somnolence is, to others, the natural relief from care and disquietude; but to them many troubles and fears arise, for they dream of no pleasant things, but only of funerals, ghosts and misfortunes, and awake to many imaginary sorrows. So much are they distempered in body and mind that it

seems they make of this life a purgatory to expiate offences which only some irrational creatures could have committed in a pre-existent state. Nor is this the case only in those who are always hateful and disagreeable, but prevails at times in those who, except when in these preposterous passions, are quite judicious persons, and who greatly excel in profoundness of thought and solidity of speech many of those whose minds have never been disturbed by these tormenting freaks. This very dreadful state of mind is most prevalent in those who have endured great misfortunes, grief, care and disappointments, especially when combined with hard study or anxious thinking, all allied with an ill or weakly state of the body. But it is not uncommon in those who have only imaginary or trivial evils to contend with. It is so common that few women entirely escape it, except such as are born with good bodies, great common sense, and have to work hard, and fare well but plainly. It is also not more remarkable for its frequency than for the numerous forms under which it appears, resembling and imitating in the most marvelous and ape-like manner most of the real distempers wherewith mankind is affected. For, in whatever part of the body it takes its seat, it immediately commences to ape and mimic the symptoms which are peculiar to the diseases of that part; so that, unless the physician be a person of judgment and penetration, he will easily be misled to suppose that such urgent symptoms arise from some real or essential disease of this or that particular part, and not merely from the illusory and deceptive hysteric passion."

It is evident that Sydenham regarded hysteria as a form of nervous or mental derangement, and a view that is partaken of by almost all the great systematic writers of the day. Thus, J. Russell Reynolds and many others say that in all hysterical subjects there is a defective or perverted will; an increased activity of emotion; an altered or augmented general sensibility; an exaggeration of all forms of involuntary motility; and curious ideational, emotional and sensational perversions, usually attended with some distinct alteration of the physical health.

Bichat was the first to locate the disease in the ganglionic nervous system—an idea which was once supposed to be corroborated by the discovery of numerous tactile corpuscles of Vaser, Merssner, Wagner, Krause and Paccini, not only on the subcutaneous tissues of the palms of the hands and soles of the feet, but all over the articular surfaces of the extremities, in the substances of the muscles, and in all the great plexuses of the sympathetic nervous system, particularly near the stomach and pancreas, in the mesentery, and near the coccygeal gland. Many

pains in the abdomen, resembling peritonitis, colic, &c., were supposed to arise from irritation of these tactile corpuscles, as well as many painful nervous affections about the joints, in the muscles, and various other parts. This view was also supposed to be further strengthened when the small nerve cells peculiar to the sympathetic nervous system were also found present in numbers in the spinal marrow and brain. Lobb is the latest advocate of this opinion. He regards hysteria as essentially an affection of the nervous system, and pre-eminently of the sympathetic.

Dr. Peters divided hysterical subjects into the honest and dishonest—the former worthy of every care and respect, but necessarily requiring very firm mental discipline as well as medical treatment; while the latter were well worthy, as Bence Jones says, of sound whippings, which would do them more good than all the drugs of the pharmacopœia, except the *infusium Benedictum*, which is composed of a decoction of tobacco charged with epsom salts. Sousing them with cold water, cramming salt into their mouths, and heavy shocks of the galvanic battery, are mild measures for those who always display the utmost duplicity and cunning, who are deceitful, perverse and obstinate, and who are always practising, or attempting to practise, the most aimless and unnatural impositions.

Treatment—Niemeyer has recalled attention to the chloride of gold and soda, in doses of $\frac{1}{8}$th of a grain. Dierbach, one of the best of the German writers on the materia medica, spoke well of it over 40 years ago. He describes it as exerting a most cheering influence upon the mind, and useful in many cases of debility. As early as A. D. 980, Avicenna recommended it in various nervous affections, such as melancholia, hysteria, palpitations, &c. It was revived in the middle ages by Raimond, Lull, Basil Valentine, especially by Paracelsus, and by John Hartman, the first Professor of Chemistry in Germany, also by Mynsicht, and by others. Hahnemann took his ideas about it from these old authorities, and not from any reliable experiments made by himself. Finally, the name of gold was so much quacked with in the shape of pills made of brick dust and madder, that it was abandoned by all reputable physicians until revived again by Drs. Martini and Niemeyer. The oils of cajeput, chamomile, lavender and orange-peel are said to lower reflex excitability in a remarkable manner, and even to act as antidotes to strychnine. Cocculus indicis and ignatia are said to be more powerful tonics and alteratives than strychnia, and *sumbul* is said by Phillips to be a better remedy for neuralgia of a certain type than any other known medicine. He says it is surprising

to note the rapidity with which severe ovarian and other neuralgias will yield to a few doses of sumbul after resisting more powerful remedies.

Dr. Peters illustrated his remarks, which were mainly extemporaneous, with numerous plates of the microscopical anatomy of the nervous system.

The subject being open for discussion, Prof. Montrose A. Pallen said he failed to agree with Dr. Peters in many of the views expressed. He thought that gentleman had underrated the amount of knowledge in the possession of the profession relating to the pathology of this affection. Unfortunately for a true understanding of hysteria, we are obliged to reason synthetically rather than analytically with reference to it. There are few *post mortems* made in this affection. We must, therefore, reason from the effects rather than from any known cause. He has been in the habit of dividing hysteria into centric and eccentric varieties. Dr. Peters' division of honest and dishonest cases clearly belongs to that variety of cases which Dr. Pallen had met. In dishonest cases, there is some defective co-ordination of the cerebro-spinal and sympathetic nervous systems. It is a very strange coincidence that the honest or peripheral forms of hysteria occur in women of high intellectual gifts—painters, poetesses, musicians—women of extraordinary mental capacity; yet, while suffering under hysterical troubles, they manifest anything but a high degree of intellection. They seem to act at variance with that law which reads: "The higher the intellectual development the less the capacity for sexual and erotic tendencies." It is a peculiar fact that whenever these women manifest hysterical symptoms, they develop sexual and erotic actions, even although they were previously the most immaculate of virgins or the most prudish of married women. It has also been observed that when women suffer from puerperal mania, they usually become more or less profane, although they may be the most refined and religious of their sex. Dr. Pallen thinks that a large majority of cases of hysteria may be traced to ovulation—that the reflex irritability which is manifested by and through hysteria finds its causation in the plexuses of nerves that are distributed in and around the ovario-genital regions. It may ultimately be found that the causation itself proceeds from the pelvic region, reflecting itself upon the brain; although the treatment is at variance with this idea. The so-called antispasmodics have little or no influence over the worst types of the disease. But it is found that in a large number of cases, if a relaxation can be produced by emetics, either by the mouth or subcutaneously, we can bring down this overstrung nervous action. When

hysteria exists in women who are laboring from uterine disease, as a general thing it is found that there is an intimate connection between the two. This fact was well illustrated by a case where a young girl, aged 16, became pregnant, and being ashamed of her condition, had an abortion produced upon herself, resulting primarily in endometritis, and finally in hystero-epilepsy. These symptoms manifested themselves at no time during the menstrual period *other than while ovulation was taking place.* The patient got well only after the irritating fluid was allowed free exit, which was accomplished by division of the cervix and internal os. The dysmenorrhœa was cured from that time, but the hysterical symptoms continued until the patient married and became pregnant. The causation of this case was undoubtedly ovulation. In regard to treatment, he could say but little, but he had frequently found that if the irritability attendant upon ovulation could be relieved, the patient would get well. In general, he would say that the only treatment which he has found useful is that which lessened pelvic congestion, pelvic inflammation, and the counteraction of those irritated and irritable conditions formed in and about the genitalia of the female.

Dr. J. Marion Sims thought that Dr. Pallen had foreshadowed the future pathology and treatment of hysteria. He had never seen a case of hysteria in a girl before puberty. He did not recollect having seen a case after the menstrual functions had ceased. He believed, however, that such cases might have occurred. He had no doubt that hysteria is a reflex phenomenon; but whether the mental, moral or physical qualities are affected —whether it results in almost dementia, with great depression of spirits, or whether in violent eclampsia—he thought the origin of them all is to be found in the generative apparatus. He thought the time would arrive when no book would be written upon hysteria in the abstract; it will rather be spoken of as a symptomatic manifestation of some ulterior trouble.

Prof. Isaac E. Taylor would accept what Dr. Peters had said regarding the pathology of the disease. He did not, however, agree in all respects with the views expressed by Prof. Pallen. He related several cases in support of the ground which he took. One of a paresis of the 8th pair of nerves, manifesting itself by continued regurgitation of whatever food she might take. She was treated by chloroform inhalations; she retained her food without difficulty, and in a few days was as well as ever.

Prof. Wm. A. Hammond thought that it must be admitted with Dr. Peters that the location of the cause of hysteria must be referred to the cerebro-spinal nervous system. Although this

assertion could not be demonstrated by the usual method, still analogy enables the investigator to form a tolerably correct opinion. Hysteria furnishes no opportunity for the study of morbid anatomy. He had been very much interested with the allusion to the physiology of the pneumogastric nerve made by Dr. Taylor. It was strongly corroborated by what he had witnessed in the case of a lady who had had a tumor taken by him from the neck. It was deeper than had been anticipated. The cavity was filled with lint in order to stop the bleeding. In two hours she was seized with violent vomiting and palpitation of the heart. There was a regurgitation, but no vomiting. He did not see her until morning—Dr. T. M. B. Cross having been in attendance during the night. When he arrived (having been sent for), he removed the plug of lint, and *immediately* the distressing symptoms ceased. He referred to an anæsthetic condition of the fauces and pharyngeal regions, which he characterized as pathognomonic of the affection. Relative to the treatment of hysteria, he was unable to offer many suggestions. He relied very much upon the bromides in its management, especially the bromides of potassium, sodium, calcium and zinc. He had had great success in their use. Of course, there are cases of hysteria which cannot be cured by any remedy. He thought that in the treatment of hysteria the element of faith in the physician was a strong point.

After a few desultory remarks, the meeting adjourned.

MEDICAL AND SURGICAL SOCIETY OF BALTIMORE.

(Reported by G. L. Wilkins, M. D.)

January 13*th*, 1876.—**Injury of the Tongue.**—Dr. Monmonier was called in consultation with Dr. Leibman to a man who, during an attack of *delirium tremens*, bit his tongue, the bite extending nearly through that organ, and severing the lingual arteries. Profuse hemorrhage ensued, and styptics, ice and the actual cautery were tried without avail. The galvano-cautery not being at hand, ligatures were passed through the tongue on each side of the injury, with the effect of arresting the hemorrhage. Except slight glossitis, the wound healed without any trouble.

Enlarged Prostate.—Dr. Brown related a case of retention of urine, due to enlarged prostate, in which, after unsuccessful attempts at catheterization, he used the aspirator with but partial relief. Subsequently he succeeded in introducing a large, curved catheter. Sir Henry Thompson proposes to dispense with the penis in similar cases, by making an artificial channel above the

pubis. Other authorities rely upon the introduction of the catheter from time to time.

Dr. Monmonier said he often succeeds in such cases in introducing the ordinary catheter by first introducing the finger into the rectum and pulling down on the prostate. He is also favorable to the excission of the third lobe.

Dr. Erich thinks the difficulty in passing a catheter in prostatic enlargement is due to the short curve of the urethra, to overcome which he uses a peculiar catheter with balls that curve upon themselves, like Squire's.

Dr. Morris, on the authority of Dr. Atlee, of Philadelphia, recommends the use of ergot in prostatic enlargement.

Dr. Arnold thought that there is not always a distinction made between prostatitis and enlarged prostate. In old persons we rarely have enlargement of the prostate, while in young men it is comparatively common. He has paid particular attention to this subject, and finds that the condition met with in advanced age is not a true hypertrophy, but an acute or chronic inflammation—a consequence of cystitis, calculus, &c.

Dr. Brown said Sir Henry Thompson says that one of every ten who reach 60 years of age suffers from enlargement of the prostate.

January 20th, 1876.—**Erysipelas Followed by Insanity**,—Dr. Winternitz related a case of facial erysipelas in a lady, which was progressing towards recovery. On the 6th day he found her perfectly insane. Pulse normal, and no fever. Gave bromide of potassium and hydrate of chloral, and on the next day found her restored to reason.

Dr. Erich, in the absence of fever, would attribute Dr. W's case to hysteria.

Dr. Morris thought temporary insanity common in similar cases.

Dr. Evans has often met with insanity in erysipelas, but it has always occurred in habitual drinkers.

Dr. Winternitz could not say whether or not his patient was a habitual drinker; it is not always an easy matter to determine this point.

Dr. Seldner.—Prof. Hebra, in treating *acne rosacea*, has observed that habitual drinkers have a peculiar smooth skin on the chest and abdomen, and accordingly recommends it as a means of diagnosis.

Uterine Fibroids.—Dr. Erich presented an interesting pathological specimen showing fibrous tumors of the uterus. The uterus is completely imbedded in tumors of various sizes, ranging from that of a small nut to that of an orange; and of different varie-

ties, as sub-peritoneal, intra-mural and sub-mucous. Two or three of the tumors are almost entirely detached from the uterus, being held by slender bands. Their presence had excited the contractile efforts of the uterus, and had nearly resulted in their detachment. In the same way, ergot may assist in throwing them off, by keeping up constant contractions of the uterine parenchyma.

Paracentesis Abdominis.—Dr. Erich also related a case of ascites from obstruction of the portal circulation, in which he performed paracentesis by means of a large size aspirator needle fixed to about two feet of the ordinary gum tubing—the instrument acting upon the principle of the syphon. The patient was placed on his left side, the point of the instrument was turned up after being introduced to avoid wounding the intestines, and about five chambers' full of serum were drawn off in a short time. Dr. Erich thinks this instrument is much superior to the old trocar and canula, as well as the more tedious process of pneumatic aspiration. [Fitch's dome-trocar is undoubtedly the best instrument for this purpose.—Ed.]

Pyæmia.—Dr. Evans related two cases originating under different circumstances, but with like results. A gentleman with traumatic pneumonia, caused by a gun-shot wound of the left lung, was progressing towards recovery when about the fourth week he was seized with pain in the chest, rigors, elevated temperature and frequent pulse. The next day the shoulder and ankle joints became swollen and painful, a pustular eruption made its appearance over the body, and a few days later an abscess formed at the inner malleolus of the right foot. There had evidently been pus formation in the lung. Another patient with orchitis from gonorrhœal extension was taken with rigors, high fever, swelling of the joints (gonorrhœal rheumatism?), pustular eruption and abscesses. Among theories advanced as to how pyæmia is produced are: The pus-globules are absorbed from a suppurating cavity, and, entering the circulation, are ultimately carried to the minute capillaries, where, on account of their large size, they become stagnated and produce inflammation, abscess, &c.; from the presence of *something* in the blood foreign to the system; from capillary phlebitis, and from a septic poison introduced in the blood. He does not believe that pus *as pus* can be absorbed; or if from any source it enters the blood, it can produce harm, unless it has undergone disintegration or fermentation. Instances in proof of this assertion are furnished in vaccination, syphilis, abscess etc., and in cases where pus has been directly introduced into the blood.

Dr. Erich thought a distinction ought to be made between

pyæmia and septicæmia. He understands pyæmia to be produced from the absorption of pus (disintegrated) and its deposition elsewhere in the system, while septicæmia is from the absorption of putrid material. We may have septicæmia without the formation of pus. The disappearance of an abscess does not imply that pyæmia must necessarily follow; the pus cells may undergo fatty (or calcareous) degeneration, become disintegrated, and reduced to a fluid condition, and in this way absorption is rendered easy.

Dr. Seldner thought pyæmia and septicæmia presented a similar clinical history and pathology.

Dr. Morris had met with, in his reading, a case of pyæmia caused by gonorrhœa which had proved fatal.

January 27th, 1876.—**Uræmia.**—Dr. Lynch related a case: Infant, æt. 7 days, urine suppressed, pupils dilated, temperature 96.5°, and convulsions. Gave spts. æth. nitr., and the child got well. Microscopical examination of the urine showed it to contain red blood corpuscles. In this case he had occasion to verify the observation of Dr. Roberts, of Manchester, who says: That in uræmia the temperature is reduced below the normal standard, while in eclampsia it is elevated. The mother of this infant had an attack of eclampsia in her former confinement, due to acute nephritis.

Dr. Seldner thought that acute congestion of the kidneys might result from compression of the vena cava ascendens by the gravid uterus.

Fracture of the Spine.—Dr. Monmonier related a case: May, 1875, man fell and fractured the lamina of the last dorsal and first lumbar vertebræ; paralysis of motion and sensation in the lower extremities, no involuntary evacuation of fæces, nor dribbling of urine. The fragments of bone were placed as nearly as possible in their natural position, and the patient was placed on the side so as to prevent displacement of them, thereby avoiding pressure on the cord. The fracture did not involve the body of the vertebra; otherwise complete crushing of the cord would have taken place. At the end of two weeks the paralysis had partially disappeared. Six weeks after the accident, prescribed 1-60th gr. strychnia, and gradually increased to 1-30th gr. *ter die*.

Dec., 1875:—Paralysis disappeared, except slight dragging of the limbs.

NEW YORK MEDICO-LEGAL SOCIETY.

(Compiled from New York Papers.)

Jan. 27, 1876.—**The Lactometer as a Milk Test.**—Dr. R. Ogden Doremus began his lecture by remarking that the most frequent

diluent of milk in New York city is water; but this adulteration does not always rest with the vendor—it is often practised by the milker. Unfortunately, judging from actual experiments made by himself upon milk, which he knew to be genuine, the lactometer (specific gravity test) is totally unreliable as a test—a view which is opposed to public opinion and the rulings of the New York Board of Health, which requires milk to be tested by the instrument. Indeed, the required use of the lactometer as the sole test rather offers a premium on dilution, for removal of cream and the addition of water are, he believed, due to the employment of the lactometer. If milk is permitted to stand, the cream rises to the surface, and this cream interferes with the workings of the lactometer. In a sample of pure milk taken from the cow about two hours before, the lactometer indicated 105; a thermometer attached to the lactometer indicated a temperature of about 60°F. Another test tube filled with cream indicated with the same instrument a bouyancy of 70°. If now we place the instrument in milk largely diluted with water, the result will be similar—it will sink to a depth to which it sank when placed in the tube containing the cream. Good milk ought ordinarily to register 100, but there are many exceptions. A few days ago while experimenting with a sample of pure milk, before the cream was removed the lactometer stood 113; after its removal, 135—a discrepancy which indicated the addition of one-seventh water. A gentleman not long since in Orange county said to Dr. D., "Let the laws of New York establish beyond a question that the lactometer is the official instrument for testing milk, and I will go into the business; but at the same time I shall start a butter factory." In Orange county he took samples of 12 cows milked in his presence; 5 out of the 12 stood below the standard of 100; they ran 98, 95, 94, 92 and 90. Upon chemical analysis of these samples, he found the fact was owing to its richness in cream. To have brought that milk into New York would have subjected the dealer to a fine of $250. So the purest milk must not be sold here; but if the cream is taken off, then it will rise to 120, 130, or more, when it will be sure to pass the test of the lactometer!

Now the great question in the Board of Health is, "What shall we do?" Of course a complete analysis will at once indicate the degree of purity of milk; but this process is tedious and very expensive. Mr. Tagliabue, who makes the instruments for the Board, has suggested a method which he has only partially examined. Take a given volume of milk, add an alkali (potash), shake it, add a little acid (acetic); then place the tubes containing this mixture in a water bath, gradually raise the temperature

to 190°, by means of a spirit lamp; coagulations of oleine and caseine will follow, rise to the top, and from the thickness of the coagula the richness of the milk is estimated. He had not experimented with this process enough to fix upon a proper standard of coagulability, as milk was of different qualities in different cows, and in the same cow of different qualities at different seasons. He thought, however, that this might be a correct guide as to purity, and that a proper standard might be arrived at.

Many physicians judge of the quality of milk by the microscope—by the number of oil globules. Fat is held in suspension in the caseine and water in milk in its natural state. The fallacy of thus judging of milk was shown by placing separate drops of the same milk between different pieces of thin glass, when in one case thousands of globules were visible, and in another scarcely any. This was accounted for in that the pieces of glass were drawn together by cohesion or capillary attraction, which in no two cases is of the same power. Therefore no two specimens thus prepared are exactly under the same conditions, and consequently do not present the same results.

Another method of judging of milk, used by physicians when wet nurses are to be engaged, is to dilute a specimen with water; hold it up for the transmission of light; the degree of its lucidity or opacity enables the physician to form a rough estimate of its richness or poorness. A little instrument had been constructed embodying this principle. It consists of two plates of glass in a cylinder, with a tiny funnel leading between them. The funnel is filled with milk, which is allowed to run in between the plates of glass, which are then, by means of a thumb screw, separated to any given extent; looking through the volume of milk between them, the experimenter can form an idea of its quality from its opacity. He recommended this little instrument for general use by medical men in judging of the quality of milk of wet nurses.

In conclusion, he said the lactometer had been discarded in every part of the civilized world. In France it was used only as a preliminary test; if it sank very deep, a sample of the milk was chemically analysed, upon which punishment is based. There ought to be some protection against the adulteration of so necessary an article. As the law now stands, dealers in their own defense were compelled to defraud the public.

The President, Dr. F. H. Hamilton, had had a suspicion that the lactometer was not to be relied upon. He remembered well some of Dr. Doremus' earlier experience in the study of milk by the aid of the microscope. Once a person applied to Dr. H. for a nurse. He sent to Dr. Doremus three nurses. One, the Prof. facetiously remarked, "looked like an Alderney cow;" still she

was rejected, as likewise the second; but the third, who presented the most feeble appearance, had the best milk—at least there was in her milk the largest number of oil globules visible under the microscope. So that he had the conviction forced upon him that the microscope also was not altogether trustworthy. He heartily favored the appointment of a committee to examine into the subject, and present it to the Legislature for action.

Dr. A. N. Bell, of Brooklyn, said that, if correct in his recollection, it was shown some years ago that the milk of diseased cows showed a greater number of oil globules than those in perfect health. He believed this to be the case with unhealthy cows fed on swill; the milk of these cows contained a great number of oil globules. Notwithstanding the large number of oil globules therein, the milk would be very unwholesome. In cows with the rinderpest the milk is completely loaded with butter. He referred to these facts simply to suggest to the committee to be appointed that it would be well to bear this in mind.

[This subject has recently been of special importance in the city of New York in that 26 dealers have been arraigned for selling adulterated milk, as tested by the lactometer, 3 of whom were convicted and 8 plead "guilty." In view of the general importance of the subject, in other communities as well, and the views expressed by Dr. Doremus, we have deemed it of interest to record the opinions, in a general way, of some experts who were called in the cases. Strange to say, it does not appear in the reports that any experts were called by the defendants—the Board of Health being the plaintiffs.

Jos. A. Gardner, of the Sanitary Police, testified that he had examined 6,000 or 7,000 samples of milk by a lactometer which he had found by experiment to register correctly according to the quantity of water mixed with milk. He had tested 100 samples of pure cow's milk at dairies, and the minimum register has been 102; one Alderney cow went to 120. The standard of pure milk is 100. If the lactometer sinks in it so as to register less than 100, it indicates the presence of water.

Prof. C. F. Chandler, who made milk analysis a special study during 1866–'73, while President of the Board of Health, was satisfied that the lactometer was the best test for water in milk. In the purest and best milk it will not sink much above 120; the average of good milk is about 110. The mark 100 on the lactometer answers to the mark 1.029 on the hydrometer.

Prof. Henry Morton, of the Pennsylvania College of Chemistry, has made various examinations relative to milk adulteration. The lactometer is highly reliable in his opinion. If milk marks 88 on the lactometer, it is adulterated.

Prof. Geo. F. Barker thinks analysis the safest test of the purity of milk. Pure rich milk has a lower gravity than skim-milk.

Prof. G. C. Cauldwell thinks no instrument is as effectual for the detection of adulteration as the lactometer.

Dr. Endeman thinks as far as adulteration by water is concerned, the lactometer is reliable; but further than that he has no faith in it. If milk marks less than 100, it cannot be pure.

Elwyn Waller, Prof. Chandler's assistant, thinks the lactometer test reliable as to adulteration by water. Milk should mark 100. Last September, he examined the milk of 100 Orange county cows; the lowest mark was 102; the Alderney's were lower than the others.

Mr. A. Bourgounon, chemist, &c., of New York, who was not examined during the legal proceedings in these cases, tested some Orange county milk which he had reason to believe was pure. The lactometer registered 120. On the addition of water to one part of this milk, the lactometer sank to 100. To another part of the same milk cream was added, and precisely the same result was obtained as by the addition of water. That milk marking 120 by the lactometer may not be at all rich, was proven by an analysis which showed it to contain only 4 per cent. of cream. Five different analyses showed that the higher the lactometer register, the less was the percentage of butter. Analysis of a sample of milk registering 130 by the lactometer gave: water, 86.126 per cent.; butter, 3.914; sugar, 5,640; caseine, 4.320. Analysis of another sample which registered only 90 on the lactometer, yielded: water, 75.096; butter, 6.150; sugar, 4.200; caseine, 4.554.

In connection with this subject, and as confirmatory of the views of Dr. Doremus, vide *Pharmaceutical Journal*, of Great Britain, Jan. 28, 1871, p. 606, as quoted by A. Hutchinson Smee, M. R. C. S., etc., on pages 15 and 16, in his recent valuable monograph on *Milk in Health and Disease*, London: Henry Kimpton; 82 High Holborn, 1875. We have not the space here to make extracts from this excellent brochure of 68 pages which we have just received through the kindness of the publisher; but we wish especially to call to it the attention of the committee appointed by the New York Medico-Legal Society to investigate the subject of milk adulteration, as it contains the results of original investigations and study by an author altogether competent for the task he has undertaken. It presents facts which "prove that it is possible for perfectly pure milk to vary considerably above 20 per cent.; and that our analysts, having fixed their standard from average milk, are perfectly ignorant of what in-

justice they cause when they condemn as adulterated all samples varying 10 per cent. from that standard."

While we are referring to this little treatise, since our space will not allow us to make book notices in this number, we cannot refrain from making the following extract which accords exactly with the experience of the most observant practitioners on this side of the Atlantic, but which view is not yet sufficiently embraced by the general run of physicians, who, from prejudice or other cause, have not tested the matter, viz.: "It is a remarkable fact that the condensed milks appear to frequently agree with infants better than the fresh milk of healthy dairy-fed cows."—*Notes by the Editor.*]

Editorial.

The Religious Herald, a denominational paper of eminent usefulness when it confines its labors to its proper sphere, has lately manifested a strange prurience concerning medical topics. Not content with the endorsement it gave some months ago of a cancer quack in this city, whose gross ignorance regarding the very disease he professes to cure has made him the laughing stock of the city and the subject of pending legal prosecution, this *religious* paper has, without provocation and without any exhibition of correct information on the subject, in an editorial (Jan. 28th) attacked a bill, misprinted last October, regarding a Board of Medical Examiners. The draft of the act, however, as presented to the Legislature was not prepared until the middle of January, and was not seen by the *Herald's* editors until after their editorial. Of course, therefore, the correct bill was misunderstood and *misrepresented* in the said editorial.

Fearing that such an editorial might damage a just cause, and knowing that the *Monthly* is not read by the masses, we yielded to the persuasion of some medical friends, and in our personal character addressed a reply to the *Herald*, showing that it had never seen the correct bill, and hence had misunderstood and misrepresented its purpose and provisions; in addition, we presented evidence enough to show the need of the proposed measure, that the objects of the bill are to protect the people from ignorance and charlatanism, and to obtain for the medical pro-

fession the same privileges as are accorded to the legal, and that the bill contains no proscriptive or oppressive feature, except as to gnorance and corruption. With assurances of this character, we thought that the RELIGIOUS *Herald* would at least withdraw its opposition and correct the errors its editorial contained; but in this we were mistaken.

Editorial "remarks" were appended to our letter, which, had the same type been used, would have been nearly half as long again as our letter, defensive of the former editorial in the main. Notwithstanding the special attention called to the facts that the Governor appoints two of the Board, who, of course, may be of other schools than the regular practice, that *therapeutics* is excepted from the subjects on which examinations are to be held because this is the only point of difference between eclectics, homœopaths, regular physicians, &c., as evidences that the bill is not proscriptive as to schools of practice, and cannot be while these provisions remain, the *Herald* yet persistently reiterates that "it is its proscriptive character which calls forth our opposition" to the bill.

As an example of the manifest want of information on the part of the *Herald* regarding even medical technology (and hence its incompetency to discuss medical questions), it remarks regarding the clause in the bill which excepts therapeutics from examination, that "If this is not the play of Hamlet with the part of Hamlet left out, we have never known an instance of its elimination." Every physician knows, and every one else should know, that of equal importance to therapeutics are the studies of *diagnosis* and *etiology*—a familiarity, indeed, with which often enables the intelligent practitioner to make no resort to therapeutics. As instances of other important duties of the practitioner of physic (not connected with therapeutics), are examinating for life insurance, or serving on writs *de lunatico inquirendo*, or as experts in many medico-legal cases, or as sanitarians or health officers, etc. Undoubtedly such every-day duties of the *practitioner* show that therapeutics may be entirely eliminated from the practice of physic, and yet leave most important fields of labor for the qualified physician. The trouble is, "Hamlet is not left out of the play of Hamlet," but the acquaintance of the *Herald* with his medical character is so limited as not to enable the edi-

tors to recognize him when he appears on the stage as the *practitioner of physic!*

As an example of the misrepresentation on the part of the *Herald* as to the provisions of the bill, is the statement in regard to practitioners already licensed, that it requires "them to appear before the Examining Board." The bill has no such provision, and no part of it can by possibility be construed as even implying it. This misrepresentation is of course due *simply* to the careless reading of the bill by the editors of the *Herald*.

An example of illogical reasoning on the part of the *Herald* may be found, among others, in the paragraph in which it compares the legal and medical sciences and professions. Apparently to justify the law requiring lawyers to be examined before they can be admitted to the bar, and as a reason why a *Medical* Examiners Board should not be established, the *Herald* has this remarkable sentence: "But, *chiefly*, (italics ours) lawyers are in a sense public officers. They are required to plead before courts, and to prepare documents for public record, and it would be unseemly and unwise that the time of judges and other public officers should be wasted by tyroes in the law. The practice of medicine is purely a private matter." Qualified physicians are in even a higher sense than lawyers *public* benefactors. Viewed in this light, as also from the very fact that in daily practice there are no "judges" to correct the errors of "tyroes" in medicine, it becomes the *more essential* that each applicant for medical or surgical practice should have his qualifications properly inquired into before the health and lives of the people are committed to his care.

We have neither the space nor disposition to follow up the discussion with the *Religious Herald* on the medical questions involved. It suffices our purpose to have presented examples of *ignorance* of the editors on medical subjects, of misunderstanding and consequent *misrepresentation* of the bill to the public eye, and of *illogical deductions*. The trouble does not rest with the straightforward honest intentions of the *Herald* to do what is right, but with its profound ignorance or want of education regarding medical matters. We would be glad if the editors would first study the *elements* of medicine before they attempt to teach the people; for as they are disposed to write on medical subjects

they do more mischief than all the ignorant doctors and charlatans put together.

As a matter of justice to ourselves, we will say that our letter to the *Herald* had to be cut down to give more room, we suppose, to the "editorial notes." Our *reply* to these notes answered each point made by the editors; but it was denied publication on the ground that enough had been written in a religious journal on medical subjects. While of course we cheerfully accord to the editors of the *Herald* the right to manage their columns as they may desire, we yet think that a religious paper ought to have corrected the errors that were published in its editorial columns when those errors were pointed out.

Homœopathic Petition.—We were a few days ago shown a circular, emanating from the only two homœopaths in this city, addressed to the General Assembly, which urges the defeat of the Medical Examiners' bill. As, however, we know of only one legislator who as yet has a copy, possibly it has been withdrawn, or else its distribution is reserved until the moment that the bill is called from the calendar, when it will be at once placed upon the desk of each member as a powerfully surprising argument why the bill should not pass!

This circular was written when the authors did not know what they were writing about; they had not seen the bill—at least, we concede this much on the score of ordinary intelligence. Their argument is that such a Board would retard immigration!! They have reason to believe that many are looking to Virginia for homes; that some families would almost as soon give up their church privileges as their homœopathic physician, and the authors state that this bill will give them a sole right to practise homœopathy in Richmond. These gentlemen are mistaken in all their propositions—*especially the last.* Now that the bill is before the House and may be seen by any one, we take the liberty of stating for them that they are ashamed of their circular—at least we suppose they are. It is utterly *impossible* that the provisions of the bill can in any manner influence immigration, *except favorably.* It is in no sense proscriptive as to school of practice; it in no manner interferes with the rights of citizens to select any phy-

sician they may desire. On the contrary, the measure offers even an *additional invitation* to any one who may be contemplating a removal to Virginia in that it promises to surround him with physicians who, in the possession of the certificate of the Board, will have added another evidence to such as they may already have, that they *are qualified physicians*—whatever may be their preferred school of practice. For any one to oppose the bill, after its reading, is to confess a conscious sense of professional ignorance—an unwillingness to submit to the test of competitive examinations, which expose ignorance regarding the fundamental principles of medicine as recognized alike by all schools. If these homœopaths are moved to action by the same commendable spirit that prompts the regular profession in this matter; if they really recognize in their school an equal amount of medical information (their circular claims a superior learning and advancement); if they really seek to advance the interests of science and humanity, they should not be less energetic in securing the adoption of the bill than is the regular profession. But, as it is, if the victory over ignorance and corruption is gained, the battle will have been fought by the regular profession, unaided by alliances with other schools—either solicited or volunteered, and certainly the honor should be accorded to whom honor is due. But we will not argue the question. We will concede to these two homœopaths, with whom we have no personal acquaintance, that they are sufficiently jealous of their school, that they are sufficiently well informed professionally, and that they have sufficient general intelligence, not to oppose the bill further after having read it.

The Twenty-Seventh Session of the American Medical Association will convene in Philadelphia, Pa., Tuesday, June 6, 1876, at 11 A. M. As a very large number of delegates are expected to be in attendance, it is important that the Committee of Arrangements should be prepared in advance to decide as to the credentials of each, and thus avoid delay in registration.

The following extract from the plan of organization shows who are entitled to representation: "The delegates shall receive their appointment from permanently organized State Medical Societies, *and such County and District Medical Societies as are recognized by representation in their respective Societies.*" It is therefore urged upon every City, District or County Medical Society in affiliation with the respective State Societies to forward lists of members and officers at once to the Secretaries of their State Societies, in order that they may be forwarded in due form to the Secretary of the American Medical Association, Dr. Wm. B. Atkinson.

Seven Springs Mass.—Our attention was called to this "mass" by the remarks of Dr. W. F. Barr, of Abingdon, published in the Transactions of the late session of the Medical Society of Virginia. The proprietors kindly sent us an ample quantity for testing purposes, and since the exhaustion of that supply we have prescribed it on several occasions. These repeated trials of the msss enable us to endorse the fact that it is a very valuable alterative, ferruginous tonic. We take pleasure in directing attention to the advertisement to be found in its proper place in our journal.

Meetings of State Medical Societies this Year.—The 29th annual session of the *Medical Association of the State of Alabama* will be convened in Mobile, April 11; Dr. Benj. H. Riggs, Selma, Secretary.

The 28th session of the *Medical and Chirurgical Faculty of Maryland* will begin im Baltimore, April 12; Dr. Wm. G. Regester, Baltimore, Secretary.

The 9th session of the *Mississippi State Medical Association* will be held in Jackson, April 5th; Dr. R. Anderson New, Port Gibson, Secretary.

The 23rd session of the *Medical Society of the State of North Carolina* is to convene in Fayetteville, May 3d; Dr. Jas. McKee, Raleigh, Secretary.

The 8th session of the *South Carolina Medical Association* will assemble in Columbia, April 11; Dr. H. D. Fraser, Charleston, S. C.

The *Tennessee State Medical Society* will convene in Nashville, April 5th. This will be a very important meeting, and the entire regular profession of the State are earnestly requested to manifest active interest by attendance, &c.

The 8th Session of the *Texas State Medical Association* will be held at Marshall, April 4th; Dr. W. A. East, Austin, Secty.

The First Volume of the Transactions of the New York Pathological Society will soon be in press. It will be based on the proceedings for 1875; but every interesting specimen of that year will be illustrated by the whole experience of the Society on the subjects for the entire period of its existence—since 1844. The Society may congratulate itself that it has selected so well qualified an editor as Dr. John C. Peters, who, by-the by, in addition to his numerous honors, has recently been selected Vice-President of the New York Public Health Association.

A Botanical Specimen of Damiana has been sent us by Dr. H. Helmick, of Washington. Thanks. Favorable reports are coming in regarding this agent.

MORTUARY STATISTICS OF SOUTHERN CITIES FOR DEC., 1875, and JAN., 1876.

Atlanta.—Still no report received. Mobile.—Only a consolidated report received for January; hence the races are not distinguished. The death over 100 years old was a negro woman, age 112. Selma.—No report for January, 1876, received; the statistics here given are for December, 1875.

Lansing, Mich.—(Per. Dr. Henry B, Baker, Sec'y State Board of Health.) Estimated population, 8,400. Deaths during Dec. 1875, and Jan. 1876, 19. Causes of death: Accident, 1; Apoplexy, 1; Cancer, 1; Consumption, 2; Convulsions, 1; Debility (general), 1; Diphtheria, 2; Hepatitis, 1; Nervous prostration, 1; pneumonia, 2; scarlatina, 6.

(Compiled from Reports of the several City Boards of Health.)

Cities	RICHMOND, VA.				NORFOLK, VA.				LYNCHBG, VA.				MOBILE, ALA.				SELMA, ALA.				PETERSBG, VA.			
Health Officers, ... Doctors	J. G. Cabell.				J. B. Whitehead.				W. H. Dulaney.				W. D. Bizzell.				John P. Furniss.				J. H. Claiborne.			
Population	Census Feb., 1874, though estimated at 65,000.				Estimated.				Estimated.				Census 1870. In addition 1,200 Creoles are estimated				Estimated.				Census 1873.			
	White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.		White.		Colored.	
	33,452		27,213		13,500		9,500		7,000		7,000		18,115		13,919		3,500		4,000		8,744		10,185	
Sex	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F	M.	F.	M.	F.	M	F.	M.	F.
Number of deaths	43	43	71	61	12	14	14	21	8	11	18	23	44	34	26	33	2	6	0	2	12	11	26	32
Number still-born in addition	9		23		Color not given, 7				0		5		4		15		0		0		Color not given, 16			
Ages. Ages unknown not calculated. Under 1 year	9		38		2		11		2		6		Color not given, 31				3		...		Color not given, 10			
" 3 years	9		14		5		6		1		7		" " 13				...		1		" " 5			
" 10 "	4		6		1		1		1		5		" " 11				...		...		" " 3			
" 20 "	7		4		1		2		2		1		" " 8				...		...		" " 6			
" 30 "	9		13		5		5		1		8		" " 17				2		...		" " 10			
" 40 "	5		12		3		2		...		4		" " 16				...		1		" " 8			
" 50 "	10		13		2		4		2		2		" " 17				2		...		" " 9			
" 60 "	10		9		2		2		2		2		" " 13				...		...		" " 11			
" 70 "	11		8		5		...		1		3		" " 7				1		...		" " 5			
" 80 "	10		6		...		...		2		2		" " 4				...		...		" " 5			
" 90 "	2		7		...		2		...		1		" " 3				...		...		" " 3			
" 100 "	...		2		...		...		...		..		...				...		...		" " 2			
Over 100 "	...		...		...		...		...		...		...				...		...		...			

CAUSES OF DEATH.												
Accidents, &c.	6	8	.....	3	1	2	Color not given,	6	.....	.....	1	2
Addison's Disease	.....	.....	.....	.....	.....	.....	" "	1	.....	.....	.....	.....
Alcoholism	2	1	.....	.....	.....	.....	" "	2	.....	.....	.....	.....
Aneurism	1	.....	.....	.....	.....	.....	" "	...	.....	.....	.....	.....
Apoplexy	3	4	.....	.....	.....	.....	" "	4	.....	.....	1	1
Ascites, Dropsy, etc.	.....	2	1	.....	1	1	" "	3	.....	.....	1	1
Asthma	.....	.....	1	.....	.....	.....	" "	1	.....	.....	.....	.....
Birth, and Premature Birth	.....	6	.....	2	.....	.....	" "	4	3	.....	1	.....
Brain, Inflam., Softening, etc.	6	3	.....	.....	2	1	" "	2	.....	.....	1	.....
Bright's Disease	1	.....	2	2	.....	.....	" "	3	.....	.....	.....	.....
Bronchitis	2	.....	.....	.....	.....	.....	" "	3	.....	.....	1	.....
Cancer	1	4	.....	.....	.....	.....	" "	1	.....	.....	.....	.....
Cholera Infantum, and Morbus	1	.....	.....	.....	.....	.....	" "	2	.....	.....	.....	.....
Congestion Bowels, Brain, Lungs	2	.....	.....	.....	.....	.....	" "	5	.....	.....	.....	.....
Consumption	11	21	4	4	1	11	" "	15	1	.....	6	10
Convulsions	4	7	.....	1	.....	.....	" "	6	1	.....	.....	.....
Croup	2	1	.....	.....	.....	.....	" "	1	.....	.....	.....	.....
Diarrhœa and Dysent'y,	1	1	2	2	.....	1	" "	3	.....	.....	2	2
Diphtheria	3	1	1	.....	.....	.....	" "	....	1	.....	.....	.....
Enteritis and Gastritis	1	2	2	1	2	.....	" "	3	.....	.....	.....	.....
Fever—Malarial	.....	1	.....	1	.....	.....	" "	1	.....	.....	.....	1
" Hemorrhagic Malarial	.....	.....	.....	.....	.....	.....	" "	...	1	.....	.....	.....
" Puerperal	.....	.....	.....	1	.....	.....	" "	...	.....	.....	.....	.....
" Typhoid	3	.....	.....	1	.....	1	" "	2	.....	.....	.....	.....
" Typho Malarial	.....	.....	.....	.....	.....	.....	" "	2	.....	.....	1	.....
Hemorrhage from lungs and st'mach	.....	1	.....	.....	.....	.....	" "	2	.....	.....	.....	.....
Heart Disease	3	10	2	2	3	2	" "	8	.....	1	.....	.....
Hernia, strangulated, Ileus, &c.	.....	1	1	.....	.....	.....	" "	1	.....	.....	.....	.....
Hydrocephalus	.....	1	.....	.....	.....	.....	" "	1	.....	.....	.....	.....
Inanition, Marasmus, Old Age, &c.	9	12	1	2	.....	3	" "	8	.....	.....	.....	2
Meningitis, and Cerebro-Spinal	4	.....	.....	.....	2	.....	" "	3	.....	.....	1	.....
Myelitis	.....	.....	1	.....	.....	.....	" "	...	.....	.....	.....	.....
Paralysis, General	1	5	.....	.....	2	.....	" "	1	.....	.....	1	1
Pleurisy	.....	.....	.....	1	.....	.....	" "	...	.....	.....	.....	.....
Pneumonia	12	16	2	3	2	1	" "	10	1	.....	5	6
Pompholix	.....	.....	.....	.....	.....	.....	" "	1	.....	.....	.....	.....
Rheumatism and R. Cachexia	.....	1	.....	.....	.....	.....	" "	2	.....	.....	.....	7
Scrofula	.....	2	.....	.....	.....	.....	" "	2	.....	.....	.....	2
Small Pox	1	1	.....	.....	.....	.....	" "	...	.....	.....	.....	.....
Stomach Ulcer and Dysyepsia	2	1	.....	.....	.....	.....	" "	...	.....	.....	.....	1
Syphilis	.....	3	.....	.....	.....	.....	" "	1	.....	.....	.....	.....
Tabes Mesenterica	.....	1	.....	.....	.....	.....	" "	1	.....	.....	.....	1
Teething	.....	.....	.....	.....	.....	.....	" "	...	.....	.....	2	1
Tetanus	1	1	.....	1	.....	.....	" "	1	.....	.....	.....	1
Thrash	.....	.....	.....	1	.....	...	" "	1	.....	.....	.....	.....
Tonsilitis	.....	1	.....	.....	.....	.....	" "	...	.....	.....	.....	.....
Trismus Nascentium	.....	2	.....	2	.....	.....	" "	8	.....	.....	1	.....
Umbilical Hemorrhage	.....	.....	.....	.....	.....	.....	" "	...	.....	.....	1	1
Whooping Cough	.....	.....	.....	.....	.....	.....	" "	1	.....	.....	.....	.....

Death of a Good Physician.—Dr. Joseph Coleman Carter died suddenly, Wednesday, January 26th, 1876, at his residence in Versailles, Woodford county, Ky., in his 68th year. The Doctor was born in Albemarle county, Va., in 1808; but his parents removed shortly after and settled in the heart of the blue grass region of Kentucky. His ancestry were among the early and most influential settlers of Virginia.

The subject of this sketch received a good preparatory education, and then studied medicine with the most profound physician of his time in the West, Dr. Daniel Drake, and received his degree of Doctor in Medicine from the Transylvania University, in 1832. From that time to the period of his death he has been actively engaged in the practice of his profession in Versailles and throughout Woodford and the adjoining counties. Dr. CARTER retained for his preceptor the most kindly and affectionate regard, naming one of his sons Daniel Drake, now the leading physician in Versailles. He also had a fine oil portrait of Dr. Drake in his parlor.

Dr. C. was a man of genial disposition, affable manners, and full of exact information relative to the diseases of his section—important to the profession and useful to the patient. He had an active mind and a most retentive memory, so that as he advanced in years he unconsciously became an authority on almost every subject in his profession, and in the multiferous interests of an agricultural and stock-raising community. He was throughout life a most exemplary christian citizen, discharging with ability and fidelity all the duties and responsibilities of husband, parent and trusted physician, and enjoying to the fullest extent the respect and confidence of all his acquaintances.

By his sudden demise, Versailles and the vicinity lose the services of a most experienced physician and a wise counsellor. The influence for good which his correct life has had upon all who observed his daily walk and conversation, and his devotion to his profession, will not soon be lost to the community where he so successfully labored. May he rest in peace. J. M. T.

Dr. C. F. Couch died at his residence in Petersburg, Va., February 25, 1876, aged 62 years. At one time he was President of the City Board of Health, and enjoyed a large share of public confidence as a physician.

INDEX TO VOLUME II.

EXPLANATIONS.—The letters V. T. preceding some of the figures refer to the paging of the **Transactions of the Medical Society of Virginia, 1875,** which was issued with the November No., 1875, of the *Monthly*, and which, in the completed volume, should be bound immediately after the journal matter proper.

In the same manner, the letters C. S. refer to the **Proceedings of the Association of Medical Officers of the Confederate States Army and Navy, 1875,** issued with the December No., 1875, but which should be bound after the "Transactions of Medical Society of Virginia."

☞Attention should be called to an error in paging—pages 352–372 inclusive being repeated. This Index has been prepared as if this error did not occur; in other words, the correct paging, as it *should have been*, has been observed. The errors in paging alluded to may be easily changed with pen and ink by parties who bind the volume.

INDEX TO CONTRIBUTORS TO VOLUME II.

JOHN S. APPERSON, M. D., Town House, Va.....V.T. 65
F. K. BAILEY, M. D., Knoxville, Tenn.....197, 430
PHILLIP B. BAKER, M. D., Suffolk, Va.....V. T., 68
T. ROBERTS BAKER, Grad. in Phar., Vice-President Amer. Pharmaceutical Association, Richmond, Va..... 525
JOHN H. BALDWIN, M. D., Cedar Creek, Va..... 283
E. C. BARRETT, M. D., Jerusalem, Va.....671, 871
ROBERT L. BARRETT, M. D., Louisa C. H., Va..... 120
JOHN BARTLETT, M. D., Pres't Society Physicians and Surgeons, Chicago, Ill..... 566
GEORGE BAYLES, M. D., New York, N. Y..... 188
W. J. H. BELLAMY, M. D., Wilmington, N. C.....31, 819
A. S BETTELHEIM, D. D. (late of Richmond), San Francisco, California.....349, 441
WM. D. BIZZELL, M. D., Demonstrator of Anat., Med. Col. of Ala.; Health Officer, etc., Mobile, Ala. (See also reports of proceedings of Mobile Medical Society)..... 512
HARVEY BLACK, M. D., Ex-President Med. Soc. Va.; Med. Superintendent Eastern Lunatic Asylum, etc. (late of Blacksburg), Williamsburg, Va..... 320
J. T. BOUTELLE, M. D., Hampton, Va.....V. T.. 64
PAUL BOYCE, M. D., Borden, California..... 515
WM. H. BRAMBLETT, M. D., Newbern, Va..... 861
GEORGE HALSTED BOYLAND, M. A., M. D., Laureate of Leipzic Med. Faculty; Ex-Surgeon French Army (Medaillé), etc., Baltimore, Md.....98,184,267,437,598,820
F. T. BROOKE, M. D., Cuckoo, Va..... 668
CLARENCE A. BRYCE, M. D., Richmond, Va..... 678
HARVEY L. BYRD, M. D., Late Prof. in Medical Colleges in Savannah, Ga., and Baltimore, etc., Baltimore, Md..... 729
JAMES L. CABELL, M. A., M. D., President (Va.) State Board of Health; Prof. Physiol. and Surg., University of Virginia.....V. T., 27; V. T., 71
JOHN J. CALDWELL, M. D., Baltimore, Md..... 41,105
JULIAN J. CHISOLM, M. D., Prof. Eye and Ear Surg. in Univ. of Maryland; Surg. in charge Baltimore (Md.) Eye and Ear Institute, etc..... 209
WALTER COLES, M. D.. St. Louis. Mo..... 461
JOHN L. COOK, M. D., Henderson, Ky.....385,845
G. W. CURREY, M. D., Nashville, Tenn.....714,797
WM. C. DABNEY, M. D., Charlottesville, Va.....V. T., 9; V. T., 15; 736,781.873
H. WYTHE DAVIS, M. D., Richmond, Va..... 407
GREENSVILLE DOWELL, M. D., Prof. Surg. in Med. College, Galveston, Texas..... 322
J. A. DRAUGHAN, M. D., Nashville, Tenn..... 347
THOS. J. DUNOTT, M. D., Surg. City Hospital, Harrisburg, Pa..... 593
M. G. ELLZEY, M. D., Prof. in Mechanical College, Blacksburg, Va..... 802
A. M. FAUNTLEROY, M. D., Ex-Pres., and Hon. Fellow, Med. Soc. of Virginia; Member of (Va.) State Board of Health, etc.; Staunton, Va.....720; V. T., 30
HUME FIELD, M. D., San Marino, Va..... 101
A. W. FONTAINE, M. D., New Canton, Va.....26,122,501,649
F. T. FRY, M. D., Quinnemont, W. Va..... 348
WM. K. GATEWOOD, M. D., Jamaica, Va.....345,806
V. W. GAYLE, M. D., Ex-Surg. Navassa Islands, Catonsville, Md..... 723
SAML. C. GLEAVES, M. D., Ex-President Medical Soc. of Virginia; Wytheville, Va.....V. T., 1
W. F. GLENN, M. D., Nashville, Tenn..... 725

W. D. HAGGARD, M. D., Nashville, Tenn..... 477
JOHN L. HARMANSON, M. D., Pungoteague, Va..... 856
GEORGE T. HARRISON, M. A., M. D., Asst. Phys. to Woman's Hospital, State of New York, New York City.....263,489,578
Z. B. HERNDON, M. D., Richmond, Va..... 126
ROBERT J. HICKS, M. D., Williamboro, N. C..... 808
H. LENOX HODGE, M. D., Demonstrator of Anatomy, Univ. Pa., Philadelphia..... 467
WM. D. HOOPER, M. D., Lynchburg, Va..... 277
FRED. HORNER, Jr., M. D., Salem-Fauquier, Va..... 39
J. HUGGINS, M. D., Newberne, Ala..... 656
H. OTIS HYATT, M. D., Kinston, N. C.....280,343
R. W. I'ANSON, M. D., Bacon's Castle, Va..... 284
MARY PUTNAM JACOBI, M. D., New York.....617,693
H S. JONES, M. D., Corydon, Ky..... 194
JOSEPH JONES, M. D., Prof. Chemistry and Clin. Med., Med. Dept. Univ. La.; Visiting Phys. Charity Hosp.; author of "Medical and Surgical Memoirs," etc., New Orleans. 11
LEVIN S. JOYNES, M. D., Emeritus Prof. Physiol., Med. College Va.; Secty. Va. State Board of Health, etc., Richmond, Va..... 153
A. F. A. KING, M. D.. Prof. Obstet. and Gynæcol., Columbian Univ., Washington, D. C.. 789
HENRY LATHAM, M. D., Lynchburg, Va.....V. T., 60
VAN S. LINDSLEY, M. D., President Med. Society of Nashville, Tenn..... 658
OTIS F. MANSON, M. D., Prof. Physiol. and Pathol., Med. College of Va., Richmond, Va.. 328
Z. COLLINS MCELROY, M. D., Phys. to House of the Friendless, etc., Zanesville, Ohio... 868
HUNTER MCGUIRE, M. D., Prof. Surgery, Med. College Va.; Pres. Association of Medical Officers Confederate States Army and Navy, etc., Richmond, Va 500,541
BENJ. G. MCPHAIL, M. D., A. A. Surg. U. S. Army, stationed at Salt Lake City, Utah... 723
JOHN P. METTAUER, M. D., LL. D. (deceased), Worsham, Va..... 1
S. WEIR MITCHELL, M. D., Member Nat. Acad. of Sciences, Philadelphia, Pa..... 769
S. P. MOORE, M. D., Surgeon General late Confed. States; Late President Assn. Medical Officers Confed. States Army and Navy, Richmond, Va.....C. T., 3
M. J. MOSES, M. D., New York..... 639
WM. W. MURRAY, M. D., Formerly Prof. Materia Medica and Therapeutics, College Phys. and Surgeons, Baltimore, Md..... 399
G. S. N. NEWMAN, M. D., Liberty Mills, Va..... 281
J. BARBOUR NEWMAN, M. D., Richmond, Va..... 196
L. G. NOEL, M. D., Nashville, Tenn..... 315
G. W. NORMAN, M. D., Smith's Mills, Ky..... 282
FRANCIS L. PARKER, M. D., Prof Anat., Med. Col. South Carolina, Charleston, S. C.... 272
WM. W. PARKER, M. D., Richmond, Va.....V. T., 51
JOHN M. PAYNE, M. D., Secty. Assn. Med. Officers Confed. States Army and Navy, Richmond, Va..... 432
R. L. PAYNE, M. D., Member North Carolina Board Medical Examiners, etc., Lexington, N. C..... 858
JOHN C. PETERS, M. D., New York City..... 77,547
JUNIUS L. POWELL, M. D., A. A. Surg., U. S. Army, stationed at ——, Kansas..... 35
ROBT. J. PRESTON, M. D., Abingdon, Va..... 402
GEO. REULING, M. D., Surg. in charge Maryland Eye and Ear Infirmary, Baltimore...114,423
BENJ. H. RIGGS, M. D., Secty. Med. Assn. State of Alabama, Selma, Ala..... 425
JOS. SANDEK, M. D., Nashville, Tenn..... 419
S. S. SATCHWELL, M. D., Rocky Point, N. C..... 602
G. WM. SEMPLE, M. D., Hampton, Va..... 633
J. MARION SIMS, M. D., President Amer. Med. Assn.; Hon. Fellow Med. Soc. Va., etc., New York, N. Y.....V. T., 114
ANDREW H. SMITH, M. D., Physician St. Luke's Hosp., Surg. to Throat Dept. Manhattan Eye and Ear Hosp., etc., New York, N. Y..... 167
K. T. STABECK, M. D., Davis, Illinois..... 735
DAVID STEEL, M. D., M. A., Petersburg, Va..... 510
WM. S. STOAKLEY, M. D., Bay View, Va.....436,883
CHAS. G. STONE, M. D, Brightwood, D. C..... 804
RIVES TATUM, M. D., Harrisonburg, Va..... 39
W. H. TAYLOR, M. D., Washington, D. C..... 33,111,505
ALFRED G. TEBAULT, M. D., Ex-President and Hon. Fellow Medical Society Virginia, London Bridge, Va..... 229
WM. A. THOM, Jr., M. D., San Gabriel, California..... 812
C. TOMPKINS, M. D., Lecturer Anat. Med. College Va., etc., Richmond, Va..... 814
JOHN N. UPSHUR, M. D., Richmond, Va.....432,812
J. W. VAN ARNUM, M. D., Washington, D. C..... 349
E. VAN KENREN, M. D., Hammondsport, N. Y..... 116
D. R. WALLACE, M. D., Supt. State Lunatic Asylum, Austin, Texas..... 241
F. B. WATKINS, M. D., Richmond, Va.....V. T., 33
J. SPOTTSWOOD WELLFORD, M. D., Prof. Materia Med. and Therap., Med. College Va., Richmond, Va..... 137
GEO. W. WELLS, M. D., Secty. *and Reporter* New York Pathological Society; of the New York Neurological Society; of the New York Medico-Legal Society, etc.....124,895
G. L. WILKINS, M. D., *Reporter of Proceedings of Medical and Surgical Society of Baltimore, Md*.....
R. D. WINSETT, M. D., Secty. Nashville Medical Society, and *Reporter of Proceedings*.....

INDEX TO SUBJECTS IN VOLUME II,

Abdomen, Gunshot wound of, 37; Incised wound of —, ...438
Abdominal pregnancy, 675; — tapping, 894; Incubation of — typhus.....269
Abortion from apoplexy of ovum, 366; Analogy between — and dysmenorrhœa, 477; Early — and menorrhagia related 822
Abscess, Hepatic, 519, 520; How to use adhesive plaster in chronic mammary —, 500; — of neck opening into pleural cavity, 744; Pelvic —, 343; Perityphlitic — 120; Umbilical —, ...370
Absent menstruation, see *Amenorrhœa.*
Academy of Medicine, Richmond, See *Society Proceedings.*
Accident, What to do with eyes lost by —, 209; Harmless — 606; Rare — of labor..439
Acid, Arsenious, see *Arsenious Acid.*
—, Carbolic, see *Carbolic Acid.*
—, Salicylic, see *Salicylic Acid.*
Acne rosacea, Diagnostic signs of.....893
Aconite in amenorrhœa.....553
Aconitia, Hypodermic dose of.....350
Adenia, Case of.....505
Adherent placenta 229
Adhesive plaster in mammary abscess.....500
Advances in anatomy and physiology, V. T., 16; — in hygiene and public health, V. T., 27; — in practice of medicine, V. T., 60; — in therapeutics during 1874.....617, 693
African slave-trade related to yellow fever 11
Aiken, S. C., as health resort.....814
Air, Rarified and condensed for thoracic diseases.....684
Alabama Medical Association, see *Society Proceedings;* — Board of Health..... 73
Alcohol a food, 633; — in pneumonia..... 207
Algid state, Quinia injected in trachea in..699
Aloes in amenorrhœa... 553
Alum and iron mass, Seven Springs, ...V. T., 122; 901
Amenorrhœa, 738; Pathology and treatment of — , ...547
American Medical Association, see *Society Proceedings;* — Neurological Association, see *Society Proceedings.*
Ammonia in amenorrhœa, 554; Hypodermic dose of caustic — 350
Amputation at advanced age, 741; — required for birth, 433; — of cervix uteri, 532; Death during amputation above shoulder joint,..... 373
Amyl-nitrite, 64, 630; — an aid in diagnosis, 44; — in spasms,..... 44
Anæsthesia, Review of,.....620
Anæsthetics (see also *Chloral,* and *Chloroform*), Danger of — in interstitial nephritis, 267; — in obstetrics.....858,861
Analogy between early abortion and dysmenorrhœa..... 477
Anatomical rooms, Construction of.....467
Anatomy, &c., Advances in..... .....V. T., 16
Anchylosis of fingers, Apparatus for,.....272
Anilin poisoning by a hat,.....440
Animation, Inflation of lungs in suspended,.....750
Ankle joint, resected for compound dislocation..... 51
Anomalies in obstetrics, (See also *Monstrosity*).....739
Anteflexio uteri, Cases of,..... . .... V. T., 44
Anteversio uteri, Cases of,.....V. T., 44
Antimonii et potas. tartras, see *Tartar Emetic.*
Antipruritic remedy.....476
Antiseptic method, Lister's.....599
Antrum maxillare, Catarrhal suppuration of,..... 63
Anus closed by nature, Artificial.....120
Aphasia cases, 110; — due to vesical calculus 377
Aphonia, Electricity for nervous.....868
Apiol in amenorrhœa..... 555
Apomorphia, 680, 710, 749; Hypodermic dose of muriate of —,.....350
Apoplexy of ovum, Abortion from.....366
Apparatus for anchylosis of fingers, &c.....272
Argenti nitras, see *Silver-nitrate.*
Arm and shoulder presentation.....237
Arsenic, 706; — found in bismuth subnitrate, 802; — in amenorrhœa, 555; — in diabetes, 707; —in fermentation.....707
Arsenious acid poisoning.....194
Articular (See also *Joints*), Etiology of congenital — deformities.....184
Aspiration with dome trocar, 52; — for hemorrhage into pleural cavity, 745; — in intestinal obstruction.....277
Atrophy of optic disc after post partum hemorrhage 739
Atropia in hectic sweating, 695; — in salivation, 696; Hypodermic dose of sulphate of —, 350; Antagonism of — to calabar bean.....694
Ayres' truss for umbilical hernia.....122

Baltimore Med. & Chirurg. Society, see *Society Proceedings.*
Baths, Warm, in puerperal diseases, 442; Warm disinfecting — for wounds.....593
Beds, Insulation of, in rheumatism,.....456
Belladonna in exophthalmic goitre, 696; — poisoning..... 461
Biborate of soda in amenorrhœa..... 564
Bichloride of mercury, Hypodermic dose of.....352
Bile, Spectrum of.....V. T., 21
Bilious fever.....677
Bioplasson doctrine.....208
Birth during 12th month, 515; Premature —,.....235
Bismuth-subnitrate, Arsenic in..... 802
Bites of spiders, Cases.....633
Black cohosh in amenorrhœa.....556
Blacks and whites, Comparative mortality of.....153,212
Bladder, Cancer of, 116; Eversion of — in adults, 48; Effect of ergotin on —, 185; Gunshot wounds causing stone in —,.....541
Blood, V. T., 10; Composition of — during pregnancy, 137; How long — retains vivifying property, 577; Transfusion of — 205; — vomiting of nurslings.....439
Blood letting, Dr. Gross on, 201; Dr. Byrd on —, 729; — in disease, 747; — during pregnancy, 137; — in puerperal convulsions.....240,425,797
Blood vascular tissue.....V. T., 16
Blue urine, Case of.....883
Board of Health, Alabama, 73; Virginia..72
Board of Medical Examiners, 3rd [Ky.] District.....302
Boeck's syphilitic wards.....733
Bone, Researches regarding.....V, T., 16
Bones, Interdental splint for fractured maxillary—, 315; Trephining — in neuralgic ostitis, 737; Turbinated —, ..V. T., 19

BOOK NOTICES, Etc.

Acology and Therapeutics, Treatise on, (Westmoreland) 614
American Pharmaceutical Association, 1874, Proceedings of..... 65
Alabama, 1875, Transactions of Medical Association of.....536
Bad Health of American Women (Reeves) 378
Childhood and Infancy, Diseases of (J. Lewis Smith).....839
Cholera, Asiatic or Bengal, (Peters).....143
Cholera Epidemic, 1873, in United States.753
Dictionary of English Language, Unabridged (Webster), 612; (Worcester)... 66

Book Notices.—Continued.

Diet in Health and Disease, (Chambers).297
Eastern [N. C.] Medical Association, 1873, Proceedings of..... 67
Eczema, Management of (Bulkley).....378
Electricity in Medicine, Status of, (Hutchinson) 297
Extra-Uterine Pregnancy (Parry).....840
Fever, Study of Nature and Mechanism of (H. C. Wood)..... 68
Fractures and Dislocations, Practical Taeatise on (Hamilton)..... 755
Hygiene of U. S. Army, with Description of Military Posts, Report on (Surg. Genl's. Office)..... .293
Iridotomy (Calhoun).....379
Massachusetts Medical Society, 1875, Transactions..... 379
McDowell [Ky.] Medical Society, 1874, Transactions 295
Medical Diagnosis (Da Costa).....840
Medical and Surgical Memoirs (Jones)....751
Midwifery, including Diseases of Pregnancy & Puerperal State (Leishman)..756
Mtlk in Health and Disease (Smee).....899
Minor Surgery and Bandaging (Heath)..611
Nervous System, Lectures on Diseases of (Bauday).....613
Pamphlets, books, &c., received, ...70,144,298,379,457,758
Paralysis from Brain Disease (Bastian)...534
Pennsylvania Hospital, 1875, Report of Board of Managers.....380
Phthisis: Its Morbid Anatomy, Etiology, etc. (Flint).....756
Physicians' Call-book and Tablet.....842
Physiology, Treatise on Human (Dalton), 757; — (Flint, Jr.).....758
Poisons, in Relation to Medical Jurisprudence (Taylor).....613
Punctuation, Handbook of (Turner).....755
Rheumatism in Infancy and Childhood, Acute (Jacobi)..... 70
Six Months under the Red Cross with the French Army (Boyland).....298
South Carolina Medical Association, 1875, Transactions of.....534
Surgical Cases treated at St. John's Hospital (Pooley) 143
Syphilis and Some Forms of Local Disease affecting principally the Organs of Generation (Lee).....613
Therapeutics, comprising Materia Medica and Toxicology, Treatise on (H. C. Wood) 612
Urine, Examination of (Fowler)..... 69

Uterine Diseases, Philosophy of (Emmet).143
Uterine Displacements by Position, Treatment of (Campbell).....379
Vision: Its Optical Defects and Adaptation of Spectacles (Fenner).....611
Visiting List, Physicians (Lindsay & Blakiston).....613
Borax in amenorrhœa.....564
Bowels, Obstruction of, (See also *Intussusception*).....608
Brain, Congestion of, 288; Change in lungs after — injuries, 442; Embolism in —, 512; Obscure — disease.....668
Bromide of camphor.....628
Bromide of lithium in sleep disorders.....476
Bromide of potassium, See *Potassium Bromide*.....
Bromine, Hypodermic use of — in hospital gangrene.....350
Burns of fingers, Apparatus for anchylosis after.....272
Cæsarean section in North Carolina.....811
Caffeine, 693; Hypodermic dose of —,.....351
Calabar bean, Antagonism of atropine —, 694; — in general paralysis, 697; — in tetanus.....696
Calculus, Renal, a cause of suppression of urine.....683
Calculus, Vesical, causing hemiplegia and aphasia, 377; — after gunshot wounds of pelvis, 541; — causing hydro-nephritis, 204; Frequency of — in Texas.....322
Californians, Child-bearing among.....812
Camp diseases.....C. T., 4
Camphor, Hypodermic dose of.....350
Camphor-bromide.....628
Cancer viewed clinically, 187; Case of — of bladder, 116; Case of — of stomach and liver.....369
Cannabis Indicis, Hypodermic dose of tincture of.....352
Cantharides in amenorrhœa.....556
Capsules, Gelatin, as uterine medicaments.440
Carbolic-acid in carbuncle, Hypodermic use of —, 875; — in diabetes, 704; — in erysipelas, 704,736; — in gonorrhœa, 38; —in hæmorrhoids, 440; Hypodermic dose of —, 357; — and salicylic acids respectively, 596; — and silver nitrate explosive, 51; Uses of —,.....197,703
Carbuncular disease, Anti-virulent fluids hypodermically for.....875
Cardiac disease. See *Heart Disease.*
Catamenia. See *Menstruation.*
Catarrhal fever, Pneumonic complications of, 430; — suppuration of antrum maxilliary, 63; — vaginitis in a child..... ...609
Causes of disease, Preventable.....V. T., 9
Cellulitis, Fistula following pelvic.....286
Cerebral (see also *Brain*) congestion, 288; — embolism, 512; Urine in — hæmorrhage.....442
Cerebro-spinal meningitis.....677
Cervix uteri, Amputation of.....532
Change of climate for consumptives.....126
Change of type in disease.....245
Chenopodium olidium in amenorrhœa.....556
Child, Digestive apparatus of a —, V. T., 20; Precocious development in a —, 656; Vaginal catarrh in a —,.....609
Child-bearing among native Californians..812
Child-bed fever. See *Puerperal fever.*
Chloral-hydrate in cholera infantum, 360; Enemata of — in eclampsia, 856; Hypodermic dose of —, 351; Intravenous injection of — as anæsthetic, 820; — locally for pruritus vulvæ, 878; — in obstetrics, 858,861; — in tetanus, 280; Uses of —,.....,623,681
Chloroform, 617; — in eclampsia, 281; — in eye surgery, 314; — in obstetrics, 858,861; — in pœdiatrics, 186; Resuscitation from — narcosis.....50,681
Cholagogues.....V. T., 62
Cholera, 523; — due to drinking water, ...V T.. 11
Cholera-infantum, 328,407,436,600; Chloral in —,.....360
Chorea in negro.....64,284
Chronic mammary abscess, How to use adhesive plaster in.....500
Cicatrices of fingers, &c., Apparatus for...272
Cimicifuga racemosa in amenorrhœa.....556
Circulatory diseases, Pneumatic treatment of.....684
Clandestine delivery.....234
Climate for consumptives, Change of.....126
Climatology.....814
Clitoris, Hypertrophy of.....609
Cocoaine.....693
Codeia, Hypodermic dose of.....351
Colocynth in amenorrhœa.....556
Comparative mortality of whites and blacks.....153,212
Complication of locked heads in twin labor.....410,812
Composition of blood in pregnancy.....137
Condy's fluid in gonorrhœa.....348
Confederate Army and Navy, Proceedings of Association of Medical Officers of —, See EXPLANATIONS heading this Index.
Confederate Medical Bureau.....C. T., 3
Congenital joint deformities, Etiology of..184

Congestion, Cerebral.....288
Conium, Case of poisoning by.....152,282
Conjunctiva of rabbit transplanted for symblepharon.....114
Consciousness affecting memory, Temporary loss of.....741
Constricted os uteri in labor incised.....345
Construction of anatomical rooms.....467
Consumption, Change of climate for —, 126,814; Curative processes in —, ...210
Convulsions (See also *Eclampsia*) due to arsenious acid, 194; — in eczema, 368; Epileptiform — after pleural injections, 879; Chloral enemata for puerperal —, 856; Chloroform in puerperal —, 281; Cases of puerperal —, 218,240,292,425,791; Reflex —, ... 61
Cornea, Injury to.....520
Corrections.....303,842
Corrosive sublimate, Hypodermic dose of...352
Cotton root in amenorrhœa.....559
Coxalgia, Sayre's splint in.....347
Craniotomy.....740
Creosote and nitrate of silver explosive.... 51
Croton-chloral.....629
Croup and diphtheria, Relation between...445
Cundum, Uses of..... 68
Curable and incurable diseases.....385
Curative processes in consumption.....210
Custard, Poisoning by boiled.....354
Cyanate of potash, Poisoning by.....600
Cystitis, Case of chronic.....263
Damiana.....108,148,285,301,348
Danger of flowers, &c., in sleeping rooms..599
Death from medium high temperature, 443; — after thoracentesis 779
Defective drainage as cause of disease, ...V. T., 13, V. T., 71
Deformity, Etiology of articular, 184; Fœtal — related to maternal impression.....828
Delirium of typhoid pneumonia, Graves' mixture in.....283
Delivery (See also *Child-bearing* and *Labor*), Amputation and evisceration required for, 433; Clandestine —, 232; — in erect position, 230, 231; — on knees and elbows, 232; Division of fœtus required for its —, 237; Spontaneous — with shoulder presentation.....290
Dentition at 90 years of age, Third.....435
Diabetes, Arsenic in, 707; Carbolic acid in.704
Diagnosis, Amyl-nitrite as an aid to..... 44
Diarrhœa and dysentery, Digestive disturbances in, 880; Salicine in —,.....703
Dieulafoy's aspirator for intestinal obstruction.....277
Digestion in diarrhœa and dysentery, Disturbances of.....880
Digestive apparatus of infants.....V. T., 20
Digitalin, Hypodermic dose of.....351
Dilatation of os uteri for sterility, 26; — of os uteri for vomiting of pregnancy, 375; Rapid and forcible — of female urethra.....454
Diphtheria, 608,639; Nine cases — in one family, 451; Relations between — and croup, 445,517; Salicylic acid in —,...353,702
Disease, What is, 725; New method of Studying —, 789; Obscure brain —, 668; — of heart. See *Heart Disease*. Case of Hodgkin's —, 505; Preventable causes of —, V. T., 9; — due to drinking water.....V. T., 10
Diseases, Curable and incurable, 385; Cases of uterine —, V. T., 33; Pneumatic treatment of lung and heart —, 684; Change of type in —, ...245
Disinfecti ngbaths for wounds, Warm.....593
Dislocation at ankle joint, Resection for... 51
Disorders of sleep.....769
Displacements of uterus, V. T., 33; Treatment of uterine —, ...361
Dissecting rooms, Plan for.....467
Doctors and druggists.....714
Doctrine, Bioplasson.....208
Dome trocar..... 52, 124
Doses for hypodermic use.....349
Dover's powders in amenorrhœa.....557
Drainage as cause of disease, Defective, ...V. T., 13, V. T., 71
Dressing for wounds, Snow.....353
Drinking-water a cause of disease, V. T., 10; —a cause of typhoid fever.....269
Druggists and doctors.....714
Dry earth for ulcers of foot.....439
Dysentery, Digestive disturbances in diarrhœa and — 880; Ipecac in —, 517, 709; Tropical —, ...723
Dysmenorrhœa, Analogy between early abortion and, 477; Obstructive —, 526; Prescription for —, ... 41
Earth for ulcers of foot, Dry.....439
Eburnation of humerus, Sclerosis with.....373
Eclampsia, (See also *Convulsions, Puerperal*), Cases of —, 218,240,292; Varied treatment of —, ...137
Eczema, Convulsions due to, 368; Discussion on —, 290; Eczema,.....684
Elastic ligature to remove tumor.....675
Elbow-knee position in labor.....232
Electricity in amenorrhœa, 557; — in articular rheumatism.....873

Electro-photography of urethral ulcers.....368
Electro-puncture, Cure of hydrocele by....736
Electro-therapeutics, Clinical cases.....868
Elongation of lips of cervix uteri.....532
Embolism, Post mortem of cerebral.....512
Emetine.....710
Emmenagogues. See *Amenorrhœa, Pathology and Treatment.*
Emmet's vesico-vaginal fistula operation...263
Epilepsy, Nocturnal, 778; Bromide of potassium in,—, ...353,393
Epileptiform convulsions after inter-pleural injections.....879
Epithelial cancer of bladder.....116
Epithelioma of tongue.....876
Epithelium of female generative organs...547
Epsom salts, Hypodermic dose of.....352
Erect position, Delivery in.....230,231
Ergot, Placenta expelled by, 233; — in amenorrhœa, 558; Effects of — like belladonna.....680
Ergotin on bladder, Effects of,.....185
Ergotin, Hypodermic dose of — 351; — hypodermically in uterine fibroids..... 50
Erysipelas, Case of, 675; Carbolic acid in —, 704,736; — followed by insanity, 893; Tea poultice in —, ...723
Eserine 694
Ether.....621
Etiology of congenital joint deformities....184
Eucalyptus globulus, Some uses of, 515; — in intermittent fevers, 705; — in malarious atmospheres.....706
Eversion of bladder in adults..... 48
Evisceration of fœtus required for its birth433
Examiner's Board. See *Board of Examiners*
Exhaustion, Death from.....236
Exophthalmic goitre and treatment, 202; Belladonna in —, ...696
Exostoma of humerus, &c.....373
Expectant treatment.....246
Explosive medicines..... 51
Extra-uterine pregnancy, Case of.....675
Extremities, Labor requiring amputation of fœtal.....433
Eye, Child with one, 439; Injury to —, 521; What to do with an — lost through accident.....309
Eyeball, Lipoma of.....521
Femoral hernia, Incipient.....606
Fennel in amenorrhœa.....558
Ferrum. See *Iron.*
Fever, 845; Bilious —, 677; Catarrhal pneumonic complications of —, 430; Child-bed —. See *Puerperal Fever.* Eucalyptus in intermittent —, 705; Hæmorrhagic —. See *Hæmorrhagic Fever.* Malarial hæmaturic —. See *Hæmorrhagic Fever.* Mechanism of —, V. T., 25; Quinia injected into trachea in pernicious —, 699; —, puerperal .See *Puerperal Fever.* —, scarlet. See *Scarlatina.* —, typhoid. See *Typhoid Fever.* —, yellow..... 11
Fibroids of uterus, 893; Ergotin in —, 50; Subserous —, 285; Treatment of —,.528
Fingers, Apparatus for anchylosed.....272
Fistula after pelvic cellulitis, 285; Operation for artificial vesico-vaginal —, 263; Uterine rupture, with recto-vaginal —,. 501
Fitch's dome trocar..... 52,124
Florida as health resort.....814
Flowers in sleeping rooms, Danger of.....599
Fluid in gonorrhœa, Condy's.....348
Fœniculi. See *Fennel.*
Fœtal deformity.....828
Fœtus, Amputation, &c., required for delivery of, 433; — affected by maternal mental impressions.....831
Foot, Dry earth for ulcers of.....439
Foramen of Magendie.....V. T., 17
Fowler's anteversion pessary.....V. T., 117
Fracture of maxilla, Interdental splint for, 315; — of patella, 42; — of spine.....895
Fright causing heart disease, Case of.....389
Fruits in sleeping rooms, Danger of.....599
Funis. See *Umbilical Cord.*
Garratt's disc. Dr. A. C..... 76
Gaultheria in amenorrhœa.....559
Gelatin capsules for uterine medication....440
Gelseminum, 682; — in puerperal convulsions.....240
Ginger in amenorrhœa.....559
Glands, Lymph. See *Lymphatics.*
Goitre, Exophthalmic, 203; Belladonna in.696
Gold in hysteria.....889
Gonorrhœa, Carbolic acid in, 38; Condy's fluid in.....348
Gossypii radix in amenorrhœa.....559
Graduates in 1874, Medical.....144
Graves' mixture in delirium of typhoid fever.....283
Guaiacum in amenorrhœa.....559
Gunshot wounds, 683; — of joints, 35; Myosis after —, 423; —of pelvis.....35,541
Gurana in migraine.....101
Gynæcological study, Hæmatocele a.....489
Hæmatocele, Retro-uterine, a gynæcological study.....489,578
Hæmatoma, Diagnosis between hæmatocele and.....590
Hæmorrhage, Fatal, during amputation above shoulder joint, 373; Fatal intra-uterine —, 448; — into pleural cavity

aspirated, 745; — in pons Varolii, 600; — post-partum. See *Post-Partum Hæmorrhage.* Urine in cerebral —, ...442
Hæmorrhagic fever, Malarial, 70; Quinia in —, ...257
Hæmorrhoids, 606; Carbolic acid for —, ..440
Hæmostatic, Snow as.....353
Hand, Apparatus for injured.....272
Hat, Anilin poisoning in a.....440
Headache in heart disease, Persistent.....746
Heads in twin birth, Locked.....510,812
Health resorts, Southern — — and seekers, 814; Springs as —, ...145
Heart, Effects of jaborandi on.....270
Heart-disease, Persistent headache in, 746; Pneumatic treatment of —, 684; Valvular —, ...386
Heat, Death from medium great.....443
Hectic sweating, Atropine in.....694
Hedeoma pulegioides in amenorrhœa.....559
Helleborus niger as emmenagogue.....560
Hemiplegia due to calculus, 377; Nocturnal —, 778; — in syphilitic subject 512
Hemlock poisoning, Case of 282
Hermaphrodism.....828
Hernia cerebri.....828
Hernia intestinalis, Incipient femoral, 606; Diagnosis of — obscured by enlarged gland, 371; Strangulated inguinal — in an infant, 885; Ayres' truss for umbilical —, ...122
Hiccough, Electricity for.....870
Hip-joint disease. See *Coxalgia.*
Hodgkin's disease, Case of.....505
Homœpathic petition.....903
Humerus, Exostoma of.....373
Humidity, Effects of excessive.....781
Hydatids with intra-uterine disease.....448
Hydragyrum bichloridum, Hypodermic dose.....352
Hydrate of chloral. See *Chloral Hydrate,*
Hydrocele, Double, 684; Electro-puncture in —, ...736
Hydrochlorate of ammonia in amenorrhœa.....554
Hydronephritis due to calculus.....204
Hygienic management of anatomical rooms.....467
Hypertrophic elongation of cervix uteri..532
Hypertrophy of clitoris, 609; Persistent headache in — of heart.....746
Hypodermic doses, 349; — use of purgatives, 352; — use of ergotin in uterine fibroids, 50; — use of anti-virulent fluids in carbuncular disease.....875
Hysteria.....886
Ice and morphine in puerperal fever 425
Icterus. See *Jaundice.*
Ileo-cœcal (?) abscess.....120
Impotence, Treatment of.....289
Impressions on fœtus, Maternal mental.830,831
Incised wound of abdomen, &c.....438
Incision of constricted os uteri in labor....345
Inclusion, Monstrosity by.....678
Incubation of abdominal typhus.....269
Incurable diseases, Curable and.....385
Infant, Strangulated inguinal hernia in...885
Infantile paralysis.....605,679
Inflation of lungs to resuscitate life 750
Inguinal hernia in an infant.....885
Inhalation of quinia in pneumonia.....700
Injections, Hypodermic, See *Hypodermic;* Convulsions after — into pleural cavity, 879; Intra-venous — of chloral anæsthetic.....820
Injuries, Apparatus for — of hand, 272; Lung changes in brain —, ...442
Insanity following erysipelas.....893
Insulation of beds in rheumatism.....456
Interdental splint for fracture of maxilla..315
Intertrigo, Liniment for.....441
Intestinal occlusion (See also *Intussusception*), Aspirator in —, 277; Cases of —, ..808
Intestines from wound, Protrusion of.....438
Intra-uterine hæmorrhage, Fatal.....448
Intra-venous injections of chloral.....520
Intussusception (See also *Intestinal Occlusion*), Case of.....33,608
Iodide of potassium. See *Potassium Iodide.*
Iodoform.....217
Ipecac in dysentery.....517,709
Iron in amenorrhœa, 558; Influence of — on nutrition.....444
Iron-mass, Seven Springs alum and.V. T., 122
Jaboraddi, 444,712; Effect of — on heart..270
Jaundice, V. T., 60; — in pregnancy.....678
Joint (See also *Articular*), Ankle — resected for compound dislocation, 51; Gunshot wound of knee —, 35; Apparatus for injuries of metacarpo-phalangeal —, 272; Death during amputation above shoulder —, ...373
JOURNALISTIC......843
American Medical Weekly.....844
American Practitioner.....844
Archives of Dermatology.....842
Boston Medical and Surgical Journal..304
Chicago Medical Journal & Examiner384
Cincinnati Lancet and Observer.....768
Indiana Journal of Medicine,.....768
Journal of Nervous and Mental Diseases.....768,843
Louisville Medical News,.....768

Medical Register and Advertiser.....144
Nashville Journal of Medicine and Surgery.....384
New Orleans Medical and Surgical Journal.....304
Psychological and Medico-Legal Journal.....384
Public Health Magazine.....305
Richmond and Louisville Med. Jour...844
West Va. Medical Student.....540,615,844
Juniperus sabina in amenorrhœa.....560
Kentucky Board of Medical Examiners, 3d District, 302; — Medical Society. See *Society Proceedings.*
Kidney, Hydro-nephritis due to stone in —, 204 Suppression of urine due to stone in —, 683; Tubercular —, ... 64
Knee-elbow position in labor.....232
Knee-joint, Gunshot wound of..... 35
Labia of cervix uteri elongated.....532
Labor (See also *Delivery*), Rare accident of —, 439; Complication of locked heads in twin —, 510,812; Constricted os uteri incised during —, 345; (See also *Parturition*) Pubic ligaments relaxed during —,196
Lactometer as a milk test, Reliability of...896
Laryngitis, Remarkable success in treating.....395
Lesions of muscular nerves in muscular rheumatism.....737
Life suspended, Inflation of lungs for.....750
Ligaments relaxed in labor, Pubic.....196
Ligature to remove tumor, Elastic.....675
Lingual. See *Tongue.*
Liniment for intertrigo.....441
Lipoma of eyeball.....521
Lister's antiseptic method.....598
Lithotomy, Cases of —, 768, V. T., 68; New instruments for.....322
Liver, Abscess of, 519,520; Can an animal live without —? 888; Cancer of — and stomach, 369; Diagnosis of — diseases, 607; Lymphatics of —, V. T., 21; Protrusion of — through wound.....438
Locked heads in twin labor, Complication of.....510,812
Lock-jaw. See *Tetanus.*
Loss of consciousness affecting memory....741
Lung after brain injuries, Changes in, 443; Inflation of — in suspended animation, 750; Pneumatic treatment in diseases of.684
Lymphatics of liver, V. T., 21; Syphilitic affections of —, ...873
Madder in amenorrhœa.....562
Magendie, Foramen of.....V. T., 17
Magnesia sulphate, Hypodermic dose of...352
Mal d'estomac..... 19
Mal de Siam..... 11
Malarial fever, Hæmorrhagic, 70; Quinia in — hæmaturia.....257
Malarious atmosphere, Eucalyptus in.....706
Malformation 439
Malignant pustule. See *Carbuncular Disease.*
Mammary abscess, How to apply adhesive plaster in.....500
Mammitis, Prescription for..... 39
Mania, Puerperal.....739
Maryland. See *Society Proceedings.*
Maternal mental impressions.....828,831
Maxillary, Catarrhal suppuration of antrum —, ... 63
Maxillary bones, Interdental splint for fracture of..... 315
Mechanical supports of uterus.....V. T., 114
Medical Reform.....V. T., 1
Medical Department of University of Va.300
Medical College of Virginia.....300
Medical chart.....304
Medical plants, Value of.....C. T., 6
Medical Society of Virginia, Act incorporating.....V. T., III
Medical Organizations, Value of.....658
Medicaments in womb, New way of using.440
Medicine, Report on progress in.....241
Medicines, Explosive..... 51
Memory after brain injuries, Loss of.....741
Meninges, Metastasis of rheumatism to spinal..... 41
Meningitis, Case of cerebro-spinal.....677
Menorrhagia to early abortion Relation of.822
Menstruation, Absent (See also *Amenorrhœa*), 738; Case of early —, 656; Pregnancy without —, 739; Case of retention of —, 343; Theories regarding —, 549; Vicarious —, Cases.....31,432,671,878
Mental impression, Effect of maternal.828,831
Mercury, 708; Hypodermic dose of bichloride —, ...352
Metacarpo-phalangeal joints, Apparatus for injuries of.....272
Michigan State Medical Society. See *Society Proceedings.*
Midwifery, Anæsthetics in (See also *Chloroform*), 863; Select cases in —, ...229
Migraine, Guarana in.....101
Milk, Lactometer as test of, 896; — in diarrhœa and dysentery.....882
Millefolium in amenorrhœa..... 561
Moisture upon health, Effects of excessive soil.....781
Molluscum simplex.....826
Monkshood. See *Aconite.*
Monstrosity, 828; — by inclusion.....678

Morphia, 631; — and chloroform, 621; Hypodermic dose of acetate or muriate of —, 352; Ice and — in puerperal convulsions, 425; Antagonism of caffeine, cocaine and theine to —, 694; Muriate of —, 51; Poisoning by —, ...188
Mortality of whites and colored, Remarks on.....153,212
Mortuary Statistics of Southern Cities, 74-5,150-1,152,226-7,306-7,381-2,458-9, ... 538-9,690-1,766-7,906-7
Movements, Centres for voluntary..V. T., 23
Muriate of ammonia in amenorrhœa, 554; Muriate of morphia..... 51
Muscular rheumatism, Lesions of nerves in737
Myrrh in amenorrhœa.....561
Narceia, Hypodermic dose of.....352
Narcosis, Nelaton's method in chloroform. 50
Navel (See also *Umbilical*), Round worm escaping through.....346
Neck, Abscess of — opening into pleural cavity, 744; Puncture of back of —, ... 64
Necrosis of tibia, Case of.....593
Negro (See also *Blacks*) Chorea in.....64,284
Nelaton's method in chloroform narcosis. 50
Nephritis, Interstitial..... 263
Nerves in muscular rheumatism, Lesions of737
Nervous system, Advances regarding V. T., 17
Neuralgic ostitis, Trepanning bones for...737
New-born, Digestive apparatus in...V. T., 20
New Orleans, Medical Protective Association of.....381
Nicotin, Hypodermic dose of.....352
Night terrors.....770
Nitrate of silver..... 51
Nitrite of Amyl, See *Amyl, Nitrite of.*
Nocturnal epilepsy, 778; — hemiplegia...778
North Carolina, 1875, Medical Society of, See *Society Proceedings.*
Nux vomica..... 51

OBITUARY RECORD.

Francis Condie, M. D..... 152
Joseph Coleman Carter, M. D.....908
C. F. Couch, M. D.....908
Prior G. Fore, M. D.....152
Wm. A. Gillespie, M. D.....V. T., 65
John T. Gilmore, M. D.....616
C. M. Hubbard, M. D.....152
Paul C. Lee, M. D.....152
James W. Leigh, M. D.....V. T., 66
Hugh H. McGuire, M. D.,..460. V. T., 67
John P. Mettauer, M. D.....692
J. C. Norris, M. D.....152
Wm. Owen, M. D.....V. T., 67
Lewis Rogers, M. D.....384
Mallory A. Shield, M. D.....V. T., 65
John G. Shuttleworth, M. D.....844
Peterfield Trent, M. D.....616
Obscure brain trouble.....668
Obstetrical anomalies..... 739
Obstetrics, Cases in, See *Midwifery Cases;* Chloroform in —, ...858,861
Obstruction of bowels, 608; Aspirator in..277
Obstructive dysmenorrhœa.....526
Omentum from wound, Protrusion of.....438
Operation for symblepharon, New, 114; — for artificial vesico-vaginal fistula.....263
Ophthalmic goitre. See *Exophthalmic goitre*
Opium, Southern cultivation of —, C. T., 7; — poisoning 167,188,219
Optic disc after post partum hemorrhage, Atrophy of.....739
Organizations, Value of medical.....658
Osteocopic syphilitic pains, Quinia in.....819
Ostitis, Trephining bones for neuralgic....737
Os-uteri dilated for sterility, 26; Incision of constricted — during labor.....345
Ova and ovary, Structure of..-.....V. T., 18
Ovariotomy, Fatal case of, V. T., 30; Cases of — 679; Dome trocar for —, ... 52
Ovary, An extra.....437
Ovum, Abortion from apoplexy of.....366
Oxy-hæmoglobin, Dissociation of....V. T., 20
Oxy-muriate of potash explosive..... 51
Pains, Quinia in osteocopic syphilitic.....819
Paracentesis abdominis.....894
Paralysis, Calabar bean in, 697; — of cervical sympathetic causing myosis, 423; Infantile, 605,679; Rheumatic —, ...740
Parotiditis.....357
Parturition, Post mortem.....399,566
Patella, Splint for fractured..... 42
Pathological effect of excessive soil moisture.....781
Pelvic abscess, Case of, 343; Fistula following — cellulitis.....286
Pelvis, Gunshot wound of.....35,541
Pelvis of kidney causing hydro-nephritis, Stone in —, ...204
Pennyroyal in amenorrhœa.....559
Peritonitis.....519
Perityphlitic abscess.....120
Pernicious fever, Quinia injected in trachea in.....698
Pertussis, Quinia in.....701
Pessary, Fowler's anteversion.....V. T., 117

PERSONALS, (See also *Obituary Record*)

Dr. John J. Caldwell..... 73
" John T. Darby.....308
" M. Gonzalez Echeverria.....305
" George W. Harris.....540
" E. J. Kirkscey.....308
" Hugh McGuire.....381
" Robert S. Payne.....540
" Thomas S. Powell.....308

Phalangeal joints, Apparatus for injuries of 272
Philadelphia Centennial Medical Commission 148
Phlebitis of upper extremities 806
Phlegmasia dolens of upper extremity 806
Phlebotomy. See *Blood letting.*
Phosphorus 632
Photographing, Electro. See *Electro Photographing.*
Phthisis pulmonalis. See *Consumption.*
Phymosis, Sponge tent to relieve 675
Physiological effect of excessive soil moisture 781
Physiology, Advances in anatomy and V. T., 16
Physostigma. See *Calabar bean.*
Pigments of the body ..... V. T., 22
Piles. See *Hæmorrhoids.*
Placenta adherent, with prolapsus uteri, 229; Rupture of cord at —, 230; — expelled by ergot, 233; — retained for 19 hours, 234; — prævia, 234; Artificial placental respiration in — prævia, 566; Premature detachment of — a cause of still birth 804
Plants, Value of Southern ..... C. T., 6
Plaster in mammary abscess, How to use adhesive 500
Pleural cavity, Hæmorrhage into, 745; Cervical abscess opening into —, 744; Convulsions after injections into —, ... 879
Pneumatic treatment of chest diseases 684
Pneumonia, 77; Alcohol in —, 207; Bennett's success in —, 395; Quinia inhalations in —, ... 700
Pneumonic complications of catarrhal fever 430
Pœdiatrics, Chloroform in 186
Poisoning, Belladonna, 461; Conium —, 152; Morphia —, 188 (See also *Opium* —); Arsenical poisoning, 194; — by boiled custard, 354; Opium —, 167; American Hemlock —, 282; Anilin — by a hat, 440; — with cyanate of potash 600
Politics in medical appointments 760
Polypus, Uterine, 218; — relieved without instruments ..... V. T., 64
Pons Varolii, Hemorrhage in 600
Position, Delivery in erect 230, 231
Post mortem parturition, Cases of 399, 566
Post partum hæmorrhage, 231; Pulse premonitory of —, 320; Prescription for —, 515; Atrophy of optic disc after —, 739; Cases of —, 673; Case of — in California, 812; Chloroform as predisposing cause of —, ... 859
Potash, Poisoning with cyanate of 600
Potash, Oxymuriate of 51
Potassium bromide, 628; — in epilepsy ... 353
Potassium iodide, Hypodermic dose of, 353; — in scarlatina 750
Poultice in erysipelas. Tea 723
Practitioner, Relations of general and special 419
Precocious development 656
Pregnancy, Treatment of vomiting of, 375; Birth during 12th month of —, 515; Composition of blood during —, 137; Bloodletting during, 137; Extra-uterine —, 675; Jaundice during —, 678; — without menstruation, 739; Effect of maternal impressions during — on fœtus .. 828, 831
Premature birth 235
Presentation, Spontaneous delivery in case of shoulder —, 290; Shoulder —, 236; Arm and shoulder —, 237; Anomalous fœtal —, ... 235
Preventable causes of disease ..... V. T., 9
Prizes 149, 305
Proceedings of Societies. See *Society Proceedings.*
Progress in medicine, Report on 241
Prolapse of uterus, Cases of, 42; — — in labor 229
Prostate, Enlarged 892
Pruritus vulvæ, Chloral locally for 878
Psoriasis related to epithelioma 876
Pubic ligaments relaxed in labor 196
Puerperal convulsions. or eclampsia, See *Convulsions;* Influence of blood-letting on — diseases, 137; Warm bath in — diseases, 442; — fever, 1, 402, 425, 602; — mania, 739; Death from — septicæmia .. 236
Pulsatilla in amenorrhœa 562
Pulse premonitory of post partum hemorrhage 320
Pulvis Doveri in amenorrhœa 557
Puncture of back of neck 64
Purgatives, Hypodermic use of —, 352; — in puerperal fever 3
Pustule, Malignant, See *Carbuncular Disease.*
Pyæmia 894
Pylorus, Stricture of rectum and 288
Quinia, Dose of, 62; Hypodermic dose of sulphate and muriate, 351; Effect of — on pulse, 698; Effect of — hypodermically, 698; Effect of — on temperature, 700; — inhalations in pneumonia, 700; — in malarial hæmaturia, 257; — injected into trachea in pernicious fever, 699; — in suppurations, 701; — in pertussis, 701; — as an oxytoxic, 701; — in syphilitic osteocopic pains 819
Rabbits conjunctiva transplanted in symblepharon 114
Races, Mortality of white and colored .. 153, 212

Recto-vaginal fistula, Uterine rupture with 501
Rectum, Stricture of pylorus and, 288; Electro-photographing ulcers of —, 368; Vicarious menstruation per —, ... 671
Reflex convulsions..... 61
Reform, Address on medical..... V. T., 1
Relaxation of pubic ligaments during labor 196
Religious Herald..... 900
Renal tuberculosis..... 64
Report on progress in medicine..... 241
Report on progress in therapeutics.... 617, 693
Resection for compound dislocation of ankle joint, 51; — of entire scapula..... 185
Resorts, Springs as summer health..... 145
Respiration, Artificial placental, 566; Pneumatic treatment of diseases of..... 684
Respirators..... 814
Retention of menses, Case of, 345; — of placenta for 19 hours..... 234
Retina, Termination of nerve fibres of V.T., 19
Retro-uterine hæmatocele..... 489, 578
Retroversio uteri, Cases of..... V. T., 46
Rheumatic paralysis..... 740
Rheumatism, Metastasis of — to spinal meninges, 41; Insulation of beds for —, 456; Lesion of nerves in muscular —, 737; Alterations of sensibility in articular —, and electricity in —, ... 873
Richmond Academy of Medicine. See *Society Proceedings.*
Richmond, Mortality of whites and colored in..... 153
Rooms, Arrangements, &c., of anatomical, 467; Danger of flowers, &c., in sleeping 599
Round worm escaping through navel..... 346
Rubia tinctorum in amenorrhœa..... 562
Rue in amenorrhœa..... 562
Rupture of cord at placenta..... 230, 232, 233
Rupture of womb with recto-vaginal fistula 501
Ruta graveolus in amenorrhœa..... 562
Sabina in amenorrhœa..... 560
Salicine in diarrhœa..... 703
Salicylic acid, 98, 105, 144, 271; — in diphtheria, 353, 702; — and carbolic acids respectively 596
Salivation, 696; Vicarious menstruation in form of bloody —, ... 878
Savannah 814
Scapula, Resection of entire..... 184
Scarlatina without eruption, 366; Abnormal course in case of —, 372; Iodide of potassium to prevent —, ... 750
Scarlet fever. See *Scarlatina.*
Sclerosis with eburnation of humerus.... 373
Scraping bones in neuralgic ostitis..... 737
Secalle cornutum. See *Ergot.*
Senega in amenorrhœa..... 564
Sensibility altered in articular rheumatism..... 873
Septicæmia, Death from puerperal..... 236
Serronine..... 444
Seven Springs mass..... V. T., 122, 905
Shoulder-joint, Death while amputating above 373
Shoulder presentation, 236; — and arm presentation, 237; Spontaneous delivery in —, ... 290
Silver nitrate, 51; Hypodermic dose of —, 350; — in amenorrhœa..... 555
Singultus, Electricity for..... 881
Slave trade related to yellow fever..... 11
Sleep, Some disorders of, 769; What — is not..... 769
Sleeping rooms, Danger of flowers in..... 599
Snow as surgical dressing..... 353
Society meetings..... 76, 457, 614, 905

SOCIETY PROCEEDINGS:

Alabama, 1875..... 127
American Medical Association, 1875.. 198
American Neurological Association... 304
American Pharmaceutical Association. 525
Association of Medical Officers of the Confederate States Army and Navy. See Explanations at head of this Index.
Baltimore Medical and Surgical Society..... 285, 522, 605, 603, 738, 892
International Medical Congress, Announcement..... 764
Kentucky, 1875..... 135
Maryland, 1875..... 130
Michigan, 1875..... 372
Mobile Medical Society. 445, 517, 602, 744, 822
Nashville Medical Society..... 520, 608
New York Medico-Legal Society.. 741, 896
New York Neurological Society..... 886
North Carolina, 1875..... 223
Richmond Academy of Medicine, ... 61, 210, 290, 523, 608, 675, 749, 826
South Carolina, 1875..... 133
Virginia, 1875. See Explanations at head of this Index.

Soda biboras in amenorrhœa..... 564
Soil moisture, Effects on body of excessive 781
Somnambulism..... 771
South Carolina Medical Association. See *Society Proceedings.*
Southern health resorts and seekers..... 814
Southern medical plants, Value of. C. T., 6
Spanish flies in amenorrhœa..... 556
Spasms, Nitrite of amyl in..... 44
Specialist and general practitioner, Relation between..... 419
Spectrum of bile..... V. T., 21
Sphygmograph, New..... 209
Spider bite, Cases of..... 633
Spignet, Poisoning by..... 282
Spinal meninges, Metastasis of rheumatism to..... 41

Spine, Fracture of....895
Spiritus terebinthinum in amenorrhœa..565
Spleen, Local treatment of chronic tumors of....267
Splint, Interdental,for maxillary fractures, 315: Sayre's hip-joint — used successfully, 347; — for fractured patella..... 42
Sponge-tent to relieve phymosis.....675
Springs as summer health resorts.....145
Spurred rye. See *Ergot.*
Statistics of 248 cases of uterine diseases.....V. T., 33
Sterility, Os uteri dilated to relieve, 26; Relation of dysmenorrhœa to —, 477; Relation of menorrhagia to —, ...822
Still-birth, Premature detachment of placenta a cause of.....804
Stinking goose foot in amenorrhœa.....556
Stomach and liver, Cancer of.....369
Stone-vesical. See *Calculus.*
Stramonium ointment in joint effusions.. 37
Strangulated inguinal hernia in infant....885
Stricture of rectum and pylorus.....288
Stricture, urethral, Rapid dilatation of....455
Strychnia in amenorrhœa, 565; Chloral in — poisoning, 626; Hypodermic dose of nitrate of —, 352; — in tobacco neuroses, 775; Large dose of —, ...812
Subcutaneous injection. See *Hypodermic.*
Subserous fibroids of uterus..... ..285
Sulphate of morphia. See *Morphia.*
Sulphate of quinia. See *Quinia.*
Sulphate of zinc. See *Zinc.*
Supports of uterus, MechanicalV.T.,33V.T.114
Suppressio-urini, Renal calculus causing.683
Suppurations, Quinia in.....701
Suppuration in antrum maxillare..... 63
Suspended animation,Inflation of lungs for 750
Sweating, Atropine in hectic.....695
Symblepharon, New operation for.....114
Sympathetic, cervical, paralyzed causing myosis..... 423
Syphilitic pains, Quinia in osteocopic —, 819; Hemiplegia in — subject.....512
Syphilization, Boeck's practice of.....738
Tansy in amenorrhœa.....565
Tapping. See *Trocar.*
Tartar-emetic.....710
Tea poultice in erysipelas.....723
Teething at 90 years of age, Third.....438
Temperature, Effect of quinia in lessening, 701; High — incompatible with life, V. T., 25; Death from medium high —, .443
Tenacetum in amenorrhœa.....565
Tent, Sponge, to relieve phymosis.....675
Terrors, Night..... 770
Testicles, Case of three.....422
Tetanus, Chloral in, 280; — without trismus, 358; Calabar bean in —, 696; Case of traumatic —, ...720
Texas, Cases of urinary calculi in.....322
Theine.....693
Therapeutics of 1874, Review of.....617,693
Thoracentesis, Sudden death after.....879
Tibia, Case of necrosis of.....593
Tincture cannabis indicis, Hypodermic dose of.....352
Tobacco as cause of sleep disorders, 773,780; Strychnia in — neuroses, 780; Report on effects of — upon health.....V. T., 51
Tongue, Epithelium of — related to psoriasis of, 876; Injury of —, ...892
Transfusion, 522,205; Dome trocar for —, .52
Transplantation of rabbit's conjunctiva for symblepharon 114
Treatment of thoracic diseases, Pneumatic 684; Expectant —, 248; — of chronic splenic tumors.....267
Trephining bones for neuralgic ostitis....737
Trismus, Tetanus without.....358
Trocar, Dome.....52,124,894
Tropical dysentery, 723; slave trade related to yellow fever —, ... 11
Truss for umbilical hernia, Ayres'.....122
Tuberculosis, Renal..... 64
Tumor, Subserous fibroid uterine, 285; Local treatment of splenic —, ...267
Turbinated bones.....V. T., 19
Turpentine in amenorrhœa.....565
Twin labor, Rare complication in.....510,812
Type of disease, Change of.....245
Typhoid fever, 518; Graves' mixture in —, 283; Incubation of —, ...269
Typhoid pneumonia, Graves' mixture in..283
Typhus Abdominal. See *Typhoid Fever.*
Ulcers of foot, Dry earth for, 439; Electro-photographing — of rectum and urethra368
Umbilical abscess.....370
Umbilical cord, Rupture of.....230,232,233
Umbilical hernia, Ayres' truss for.....122
Umbilicus. See *Navel.*
Uræmia.....895
Ureter, Stone in, causing hydro-nephritis.204
Urethra, Electro-photographing ulcers of —, 368; Rapid dilatation of female —, ..454
Urinary calculus. See *Calculus.*
Urine in cerebral hemorrhage, 442; suppression of — due to renal calculus, 683; Case of blue —, ...883
Uterina mucosa.....V. T., 18
Uterine elevator, Wadsworth's, 768; — fibroids, 893; Treatment of — fibroids, 528; Subserous — fibroids, 285; — polypus, 218; Intra — hæmorrhage due to hydatids with altered structure of — walls, 448; — polypus relieved without instruments, V. T., 64; Cases of — diseases.....V. T., 33

Uterus, Mouth of. See *Os Uteri.*
Uterus in labor, Prolapse of, 229; Treatment of displacements of —, 361; New way of introducing medicaments into the —, 440; Rupture of —, with recto-vaginal fistula, 501; Cases requiring mechanical supports of.....V. T., 33,114
Vaccination.....640
Vaccine virus.....549
Vaginal catarrh in a child, 609; — hemorrhage in a child.....353
Vaginismus.....609
Vagino-rectal fistula with rupture of womb501
Valvular heart disease.....386
Vaso-motor apparatus.....V. T, 24
Veins of upper extremities, Inflammation of.....806
Venesection. See *Blood letting.*
Ventilation, &c., of anatomical rooms.....467
Veratria, Hypodermic dose of.....352
Vesical calculus. See *Calculus.*
Vesico-vaginal fistula, Operation for artificial.....263
Vicarious menstruation, Cases of31,432,671,878
Virginia medical notes, 39; — board of health, 72; — medical legislation, 768; Medical College of —, 72; Defective drainage in — a cause of disease..V. T., 71
Vitality, Inflation of lungs in suspended.750
Vomiting of blood in nursing children, 439; — of pregnancy, Treatment of.....375
Vulva, Chloral locally for pruritus of.....878
Warm bath in puerperal diseases, 442; — disinfecting bath for wounds.....593
Water, drinking, as cause of disease.V. T., 10
Weights, Table of old and new.....441
Wells' monument, Horace.....305
West India slave trade related to yellow fever..... 11
Whites and blacks, Comparative mortality of.....153,212
Whooping cough, Quinia in.....701
Wilmington (N. C.) Health Superintendent..... 76
Wintergreen in amenorrhœa.....559
Womb. See *Uterus.*
Women, Composition of blood, and blood-letting in pregnant —, ...137
Worm through navel, Escape of round....346
Wound (See also *Puncture*), Protrusion of viscera through abdominal, 438; Myosis resulting from gunshot —, 423; Vicarious menstruation from —, 31; Gunshot — of pelvis, 541; Gunshot — of pelvis and knee-joint..... 35
Wounds, Gunshot, 683; Warm disinfecting bath for —, 593; Snow as dressing for.....343
Yaws..... 20
Yellow-fever related to slave trade..... 11
Zinc sulphate..... 63